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Southern Planter

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DEVOTED TO

**Practical and Progressive Agriculture, Horticulture,
Trucking, Live Stock and the Fireside.**

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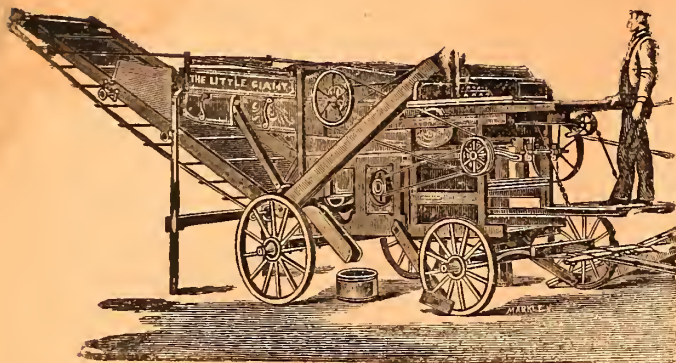
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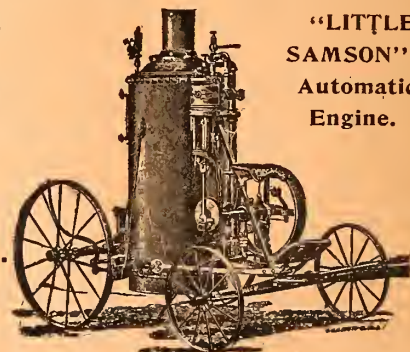
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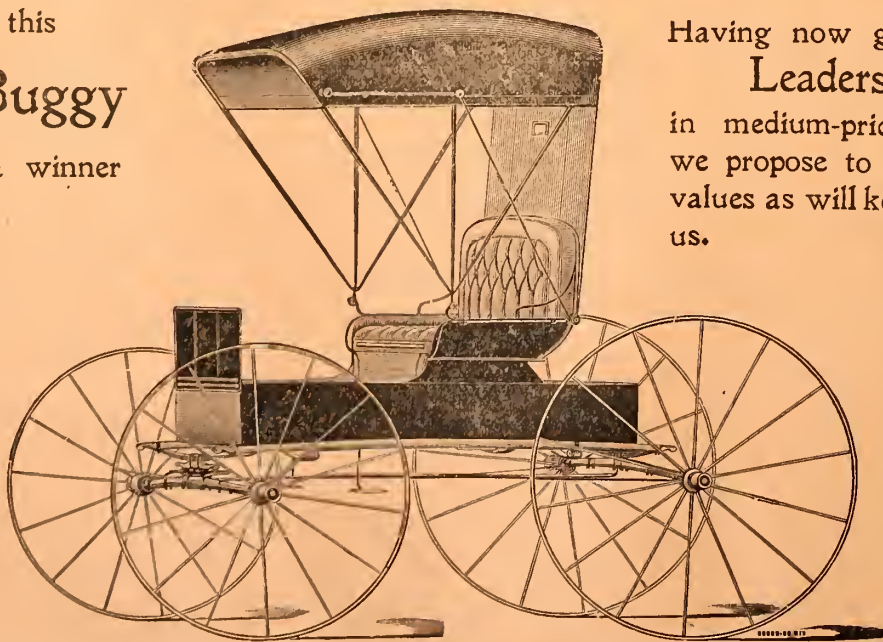
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TRUCKING, LIVE STOCK AND THE FIRESIDE.

Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

65th Year.

Richmond, September, 1904.

No. 9.

Farm Management.

WORK FOR THE MONTH.

Since writing our opening article for the August issue the general and continuous rain which we then said to be necessary for us to secure a good average crop has fortunately fallen, indeed we have had practically since that time a month of broken weather all through the South. Rain has fallen almost daily, but, as a rule, not in such heavy showers as to do injury, though in some sections there have been washing rains. The result is that the land is now well supplied with moisture, and this condition, coupled with the warmth of the soil, and a daily temperature more nearly the average for the season than has been the case for so long, has caused crops to make a splendid growth, and the prospect is for full average yields of most crops.

The threshing of the winter wheat crop throughout the country has been completed, and the result confirms our forecast of a very deficient yield. The average yield per acre for the whole country is estimated by the Department of Agriculture at slightly over 12 bushels to the acre. For Virginia the average is given at slightly over 10 bushels, for Maryland at slightly over 13 bushels, for North Carolina at slightly over 8 bushels, for South Carolina at 8 bushels, for Tennessee at a little over 11 bushels, and for West Virginia at a little over 10 bushels. Whilst these are the average yields, we have received reports of some excellent yields in some parts of this State. In this issue will be found one of 40 bushels to the acre, and Mr. Bellwood, of Drewry's Bluff, Va., tells

us that his crop ran to over 40 bushels to the acre, and this over a large crop. These large yields go to show that the season was not altogether to blame for the small average crop. The man had much to do with it as is almost always the case. The spring wheat crop is not yet fully harvested, but it is going to be a very disappointing one. Rust has played great havoc with it, and the crop will in all probability be the smallest raised for a long time. Taken together, the whole wheat crop promises to be as we forecasted, in the *PLANTER* two months ago, 100,000,000 bushels below that of last year. This means that we have raised but little more wheat this year than will be required to feed the people of the country and for seed. A realization of this fact has had its influence on the market, and wheat is now selling for \$1.10 per bushel in Chicago, as against 90c. two months ago. We expect to see it sell for a still higher price, as the wheat crop of the whole world is a deficient one.

The oat crop gives promise of being a fine average crop if weather conditions are favorable for harvesting the same. The condition is above the ten years' average.

Corn crop prospects in the South were never better, and as the area planted is above the average, we look to see a large crop cribbed. Throughout the country the prospect is for a good crop, but in our opinion not for an excessively large one, possibly not larger than that cribbed last year. We expect to see the

price of this staple remain firm, and possibly advance somewhat.

Tobacco has made a good growth, but there is considerable diversity of opinion as to what the quality of the crop will be. If the rains do not quickly cease many growers think that the quality will be coarse and the tobacco of an undesirable type, and we are afraid this will be so.

The cotton crop is in a critical condition. The continued rains have forced excessive growth of weed and hindered the setting and maturity of the bolls. A continuance of the weather we are having is going to materially reduce the yield of the crop, whilst if it takes up too suddenly and a dry period follows almost equal damage will be done. We are not looking for such an excessive crop to be picked as was promised early in the season. Every pound of the new crop will, in our opinion, be wanted at a good price.

Peanuts are not likely to a heavy crop. They made a bad start in the cold, dry weather, and there has been too much rain for them recently. The price keeps firm, and we look to see this continue, and possibly advance some.

Sweet potatoes are promising a good yield, but a cessation of the almost daily rains we are having would be of benefit to the crop.

The various forage crops have made a splendid growth since the rains began, and with fine weather to cure the same there will be an abundance of winter keep.

Pastures never looked better and live stock are in fine condition generally. There is every prospect now that there will be an abundance of feed to the end of the season, as it will take a long drouth in the fall to check the growth.

A review of the foregoing will, we think, lead to the conclusion that Southern farmers and planters have much to be thankful for. There is every reason to anticipate that they will be able to secure a fair return for their labor and capital.

The work of harvesting and curing the forage crops will require attention during this month. Do not be in too great haste to cut them. They are now

very full of sap, and will be difficult to cure unless we have very fine weather. Let the growth mature somewhat before cutting. The feed value of the crop will be enhanced and the curing will be much less difficult. Cow peas especially will need to be let alone for some time, or the curing will be especially difficult. In our last issue will be found two articles dealing with the curing of this crop, to which we invite attention. If the weather continues showery do not cut too great an area down at once, but cut a small breadth and give this all the attention it needs to cure it well and as quickly as possible, and then cut again. Sorghum is less difficult to handle than peas, as it does not spoil easily. Let it stand until the grain is well past the dough stage, and then cut and set in shocks to cure. If it can be allowed to lie on the ground broadcast for a few days the curing will be much easier, and it will not spoil by being rained on. This is also the case with soy beans, when cut for a hay crop. In our last issue will be found advice as to the proper time to cut all these forage crops, and also as to the filling of the silo.

The work of sowing grass, alfalfa and clover crops should have immediate attention, as this is the last month in the year when this work can be done with anything like a certainty of success. In our last issue we wrote very fully on this subject, and to what we then said we invite attention. From the large number of enquiries we have had we expect to see quite a considerable area of alfalfa seeded in the South. We are convinced from the reports we have had from many who have experimented with the crop that there is no reason whatever why Southern farmers should not succeed as well with this crop as Western ones have done. It is of such inestimable value as a feed, making so large a weight of hay to the acre in one year, and is of such a permanent character, that it is worth every effort necessary to make its growth successful. Talking a day or two ago with an enterprising and wide-awake farmer, we were glad to find that he had made a success with the crop upon land badly infested with weeds by seeding the same in drills two feet apart. He prepared the land finely, made it rich with manure, and then kept all weeds down the first year by cultivating it frequently. The second year it took full possession of the land, and since that time he has cut three, and sometimes four, crops off each year, and it is still making fine growth, and in complete possession of the land.

Keep on seeding crimson clover and hairy vetch all through the month as land becomes available. Sow with these seeds some wheat, oats and rye, say from half to three-quarters of a bushel to the acre, and a good cover will be provided for the land all winter, which will add to its fertility, and at the same time make good grazing, an early green forage, and good hay. A good crop of crimson clover will add from \$20 to \$30 worth of nitrogen to the acre, and a crop of hairy vetch from \$30 to \$35 worth of the same absolutely essential fertilizer. All this is gathered from the air and costs nothing but the price of 10 or 15 pounds of clover seed or a bushel of hairy vetch, and the labor of seeding these. In addition to this, these crops add humus making matter to the soil, and this humus makes available the phosphoric acid and potash in the soil, and keeps the soil from running together and baking. If the land is poor, give these crops 2 or 300 pounds of acid phosphate to the acre to induce a vigorous growth. The more luxuriant the growth the greater the quantity of nitrogen which will be stored in the soil. If no use or profit is made of these crops except their manurial value this is amply sufficient to justify the outlay of money and labor involved in their growth. No better preparation of the land for a corn crop can be made than the seeding of these crops.

The preparation of the land for and the seeding of winter oats should have immediate attention. Long experience in the growing of this crop has demonstrated that to be a profitable and successful crop, Virginia gray winter oats should be sown early in September. As this variety is the most profitable oat crop that can be grown in the South; indeed, on an average of years is the only profitable oat that can be grown in a hot climate like ours, the oat being essentially a cold climate crop, every effort should be made to get it in at the best time for it to succeed. With the oat crop as with nearly every other crop good preparation of the seed bed before seeding has more to do with the yield than the amount of fertilizer that may be applied. This preparation should have begun in August. The rains we have had have put the land into good condition for working, and every effort should be made to get the seed in by the middle or third week of this month. The small average yield of the winter oat crop in the South is almost wholly due to the fact that the crop is usually seeded too late on a poorly prepared bed, and too often on the poorest land to be cropped. When seeded after September the crop does not make suffi-

cient growth to protect the roots from being frozen with even a light frost on the setting in of winter, and much of the stand is winter killed. Another reason for this winter killing is that the seed is not covered sufficiently and proper precaution taken to drain off surface water quickly by the provision of water furrows. There is no reason why with proper seeding at the right time the average crop of the South should not be in excess of 30 bushels to the acre. We know men who make from 50 to 60 bushels to the acre regularly. These men sow in September, prepare the land well, put the crop on good land, and give it 3 or 400 pounds of acid phosphate per acre. Another great reason for light yields is that enough seed is not sowed. Instead of sowing only a bushel or a bushel and a half to the acre, *twice* this quantity of seed should be sowed. Sowing 4 bushels of seed to the acre has given the highest yield in a number of experiments, and in several of these tests the covering of the seed with cultivators was found to give better results than merely harrowing the seed in. The application of phosphate in the form of acid phosphate or Thomas slag gave an increase of 100 per cent. in the crop.

Winter barley is being sown now in the Valley and Northern sections of this State, and promises to be an acquisition to our staple crops. It gives good winter and spring grazing when sown early enough in the fall, and makes a good yield of grain. It should be seeded in September on well prepared land, which should be in a good state of fertility, as the crop calls for more available plant food than oats if to be successful. Acid phosphate applied at the rate of 300 or 400 pounds to the acre usually gives good returns on the outlay. Sow at the rate of 3 or 4 bushels to the acre.

In this issue will be found an article on the preparation for and seeding of the wheat crop, to which we invite attention.

Rape and turnips may be sown yet with a fair chance of making a crop if the fall be a normal one, though it is getting late for these crops. If the winter be a mild one the rape, if not grazed too closely, will stand over and make good early grazing in the spring, most valuable for ewes and lambs. Sow 3 or 4 pounds of seed to the acre broadcast and harrow in lightly.

Do not waste time pulling fodder. Whilst blade

fodder is excellent feed when well cured, the cost of pulling is too great with the present high price of labor for it to be saved profitably. It is also a crop easily spoiled in the curing, and if pulled at the best time for making good fodder materially injures the yield of corn from the crop. In numerous experiments made in the South, it has been demonstrated that the loss of yield in the corn made the fodder very costly feed. The blades can be saved just as well by cutting the corn at the root and setting up in shocks to cure, in this way saving both stalk and blades and not reducing the yield of corn. Cut when the corn is glazed and dented, and it will not shrink in the curing, and the stalks with the blades on them make excellent rough feed.

With the large amount of moisture in the land, and the warmth of the weather, weeds will grow fast on all stubble fields and newly fallowed land. See that these weeds are cut off with the mower before they bloom and make seed. They rob the land of fertility and moisture, for which they make no return except in providing work for another year in killing them. Leave the weeds as cut as a mulch, if not so heavy as to smother out the clover or grass where the stubble has been seeded with these crops. If a very heavy cutting of weeds is made they may be cured and saved for feed. Whilst not very valuable for this purpose, yet sheep and young stock will pick them over and get some good from them. On newly plowed land the weeds as they germinate should be killed by harrowing the land when the sun is shining and thus a fresh lot of seeds will be brought near enough to the top to germinate and be killed in like manner. In this way a piece of land may soon be cleared of weeds.

Keep the plows at work breaking land intended to be cropped next year. Plow deep and bring up some of the soil which has not been exhausted of its plant food. There is no risk in doing this at this time of the year, as the sun and air will have plenty of time to act upon this new soil and make it fit for the support of plants before the time for seeding comes round. There is plant food in abundance in nearly all subsoils for the profitable growth of large crops for years to come. It only requires to be made available by the action of the sun and atmosphere and some lime. Subsoiling should also be done where the subsoil is a good one, or where there is a hard pan underlying the surface soil. This will add to the feeding ground of the crop and serve to catch and

retain the rain as it falls for the service of the crop. With a deeply broken subsoil crops will not suffer even in a dry season for a long time. When it is realized as it ought to be that crops can only utilize the food in the soil when in a state of solution in water the importance of saving all the moisture possible becomes apparent. No crop takes its food in a solid condition. Therefore, however abundant this food may be in the soil it cannot help to grow the crop until dissolved in water. Make the soil and subsoil loose and permeable by the rain and then these will hold it like a sponge holds water, and the roots of the plants will suck it out as they call for it.

Clean out all barns, sheds, outbuildings and pens and put the manure on to thin places on the farm. Brush down all the dust, cobwebs and trash and use the lime wash brush freely in all places where live stock is to be housed. Lime is a great disinfectant, sweetener and destroyer of germs, and its use will largely help to keep stock in a healthy condition through the winter. Where buildings are in need of repairs, have these attended to at once. It is worse than useless to take stock up out of the pastures and put them into buildings where they cannot be kept dry and warm. They are better out of doors altogether than housed in wet, drafty buildings. Have the outside of the buildings either lime washed or painted. In our July issue, on page 466, we published a receipt for making whitewash for outside use which will be found almost as durable as paint. If we could but persuade Southern farmers to spend a little money in paint every year and apply the same to their houses and barns they would enhance their value by many times the cost of the paint in the eyes of prospective purchasers, and would make them much more homelike and attractive to those living in or using them.

WHEAT SEEDING.

The preparation of the land for the wheat crop is work that will call for constant attention this month. Indeed, to secure the best results this work should, as we stated in our last issue, have commenced in August. During that month the land was in most sections of the South in fine condition for plowing and working, and if advantage was taken of this as it ought to have been, the land will now be getting into good order for producing good results next year. The importance of a perfect preparation of the soil for the wheat crop is not half appreciated as it ought

to be. Men who will carefully plow and work land for the corn crop and who will then cultivate that crop four or five times during its period of growth will seed wheat on land that has been only once plowed and once harrowed and will then complain if the crop is not a good one. They entirely overlook the fact that the whole cultivation of the wheat crop must be done before the seed is sown, except possibly a light harrowing in the spring, and this too often is neglected. The perfect preparation of the land before seeding is much more important in the final results than any fertilizer which may be applied to the crop, for unless the land is finely prepared very much of the fertilizer will never help the crop at all, but be washed out of the soil by the winter and spring rains. To be of help to the crop the fertilizer must be closely assimilated with the soil, so that it shall permeate every part of it, and this can only be possible if the soil be finely broken and thoroughly mixed. The value of cultivation in securing a heavy yield of wheat is illustrated by the success which followed the old-fashioned method of seeding on a summer fallow. We have seen crops of 40 bushels to the acre produced after a summer fallow without the help of any fertilizer, on land which, if not plowed until the fall, would not produce 25 bushels to the acre, even with fertilizer. In the former case the land was first plowed in the spring, then harrowed, rolled and re-harrowed and allowed to stand for ten days or a fortnight. It was then reharrowed, rolled and harrowed again. After standing another ten days or a fortnight the harrowing and rolling was again repeated, and later it would be cross ploughed and harrowed and rolled repeatedly at intervals until October. When seeded the subsurface would be compact, but open enough to be permeated by the roots and full of moisture, and the surface soil as fine as a garden bed and without a weed seed left to germinate. Wheat sowed on such a preparation as this grew off at once and rarely suffered from winter killing. In the spring it would tiller out and cover the land, and unless the season was a most unpropitious one, would make a full crop. Whilst modern methods of rotation have largely supplanted the old summer fallow as a preparation for wheat, there is much to be learned as to the requirements of the crop from the old system. Early plowing of the land and frequent harrowing and rolling are essential to success. The subsoil must be compact, yet permeable by the roots, whilst the surface soil, say 3 or 4 inches deep, must be fine and loose. Experiments made in different sections of the

country all unite in demonstrating that frequent cultivation of the land before seeding is conducive to increased yield, and that harrowing the crop in spring after it has commenced to grow is highly beneficial. Wheat calls for a liberal supply of all the three leading elements of plant food, nitrogen, phosphoric acid and potash. A crop of 30 bushels to the acre, with the straw takes from the soil 45 pounds of nitrogen, 22 1-2 pounds of phosphoric acid, 28 pounds of potash, and 10 1-2 pounds of lime. This quantity of food at least must be available during the growth of the crop, hence the land must be naturally fertile or be artificially supplied with the food in the shape of fertilizer of one kind or another. The lime and potash can be best supplied by a dressing of 25 to 50 bushels of lime to the acre applied as soon as the land is plowed, and gradually worked into the soil during preparation for seeding. The lime will make the potash of the soil available. Experiments have proved that whilst wheat calls for this quantity of plant food, it does not call for it to any considerable extent in the early stages of its growth. Wheat assimilates its food mainly at the time of shooting the ears and filling out the grain. For this reason a slowly available phosphate like bone meal and slowly available nitrogen like that derived from the decay of a clover or cow pea crop usually gives better results than more quickly available forms of these fertilizers. Probably the best way to supply the phosphoric acid is to use half bone meal and half acid phosphate, thus continuing the supply practically over the whole period of growth. The bone meal will give also a sufficient supply of nitrogen to start the growth of the plants in the fall. The nitrogen needed by the crop is most cheaply supplied by planting on a clover or cow pea fallow. Nitrogen from this source becomes available in the summer at the time when the crop calls for it most strongly. Experiments made in various States have demonstrated that a cow pea or clover fallow can increase the yield of a wheat crop 50 per cent. over that grown upon land which has not grown these crops. These crops, however, require to be used with discretion in their management or they may actually cause a decrease in the yield. Especially is this the case with the cow pea crop. Its immense production of vines may sour the land if turned down in the late summer or early fall unless lime is also applied, and unless the crop is turned down very early, say at least six weeks or two months before the wheat is sown the land will be rendered too light and puffy for the best results. This may also happen with clover if the growth is heavy. Where

wheat is to follow these crops they should be grazed down or be cut for hay before being plowed down and lime applied. We have had very frequent complaint of failure to make a good wheat crop on a cow pea fallow, and we believe that the main cause for this was the puffiness of the land. This, however, does not always follow, as in this issue will be found a report of a crop of 40 bushels to the acre grown on a cow pea fallow, but we do not advise taking the risk. As a general principle, no better preparation for a wheat crop can be adopted than the growing of cow peas or clover or any of the legumes. By the adoption of this system alone Mr. Bellwood, of Drewry's Bluff, has brought up land that would not grow wheat at all ten years ago, so that it now produces from 30 to 40 bushels to the acre without the application of fertilizer. Where wheat is grown on land lacking in humus, and where neither cow peas nor clover have been turned down, it is well only to apply part of the nitrogen required at the seeding of the crop (say only such part as will be supplied in a dressing of bone meal) and then in the spring after the crop has started to grow freely apply a dressing of 100 pounds of nitrate of soda per acre. The most important thing in fertilizing a wheat crop is to supply an abundance of phosphoric acid. If the land is lacking in this element, then at least 300 pounds of acid phosphate, or, better still, half acid phosphate and half bone meal should be applied per acre and be well worked into the soil.

Whilst it is important to get growth well started before winter sets in, yet it is equally important not to sow so soon as to incur risk of damage from the fly. Wheat sown before frost has been felt is almost certain to be injured by the fly, especially in sections where the fly has been troublesome in the past. The last week in September and first half of October is about the best time to seed wheat in Virginia, and a little later further South. Where fly has infested the crop recently a trap crop of wheat should be seeded at once before the main crop is sown. Plow a strip of land on one side of the intended wheat field, say a couple of yards wide and fifty yards long and sow it with wheat and harrow in. If the fly is about this will be quickly infested with it laying its eggs. Before seeding the main crop plow this strip down and roll it, and thus destroy both flies and eggs. If every farmer would adopt this plan the Hessian fly would soon be unknown. As to the variety to be seeded. This should be largely determined by local selection. A variety which has proved itself adapted to a section is much more likely to succeed than one

introduced from a distance. Seed such a variety for the main crop. Let new varieties be tested only experimentally until their fitness has been proved. Amongst old standard varieties Fultz and Fulcaster still retain their reliable character. Amongst newer varieties, Nigger, Currell's Prolific, Reliable, Poole, and Harvest King are well spoken of. There is practically no difference between the yields of smooth and bearded varieties.

Seed liberally. On land in good fertility a bushel and a half of seed per acre has almost invariably given better returns than a bushel. At the Ohio Experiment Station this year in 8 out of 18 tests 10 pecks of seed gave a larger yield than a less amount of seed, and in only one of the eighteen did six pecks give the largest yield. On thin land two bushels of seed at least should be sowed.

TESTS OF VARIETIES OF WHEAT.

At the Pennsylvania Experiment Station variety tests of wheat have been conducted for many years. In tests made of five varieties—Reliable, Fulcaster, Dietz Longberry Red, Ontario Wonder and Fultz—for fourteen years, Fulcaster gave the best yield, nearly 31 bushels per acre. Fultz made nearly 28 bushels per acre, and Reliable 30 3-4 bushels.

PENNSYLVANIA POTATO TALK.

Editor Southern Planter:

The potato (in the South called the Irish potato, *Solanum tuberosum*) at the discovery of America by Columbus was found growing wild on the mountains of South America, and was also cultivated for food by the natives of all the temperate parts of the continent from Chile to Granada. The Spaniards first met with it in the neighborhood of Quito, where it was under cultivation by the natives.

About 1553 Hieronymus Cardan, a monk, is believed to have been the first to introduce it from Peru into Spain, from whence it passed to Italy and Belgium. In 1563 John Hawkins introduced potatoes into England from Santa Fe. About 1586 potatoes were taken from North Carolina and Virginia to Ireland and cultivated on the estate of Sir Walter Raleigh, near the city of Cork.

A meal consisting entirely of potatoes is not a well-balanced ration, being nearly devoid of nitrogen and fat. Butter improves the ration, and drinking milk, while eating (as is generally practiced in Ireland), makes it still better. It is probable there is no crop

raised in this country that is more talked about among farmers, or oftener discussed in the agricultural press, than potatoes. They are a valuable crop raised on every man's farm, in every part of the country, and constitute a palatable and inexpensive food to be found on every man's table at nearly every meal.

It may not be the case elsewhere, but in this part of northern Pennsylvania the best land for potatoes is on the hills back from the river, where more bushels are raised per acre, and generally of better quality, than on the river flats. Ground can be too rich for raising potatoes. I once plowed part of an old barnyard which turned up rather lumpy, but was got into good, mellow condition by repeated harrowing. It was planted with good seed at the proper season, and cultivated as long as the tops would allow it. There was an immense growth of tops, which fell down and covered the ground. The tops were not so very large in diameter, but of enormous length. I congratulated myself that there would be an immense yield of potatoes, but to my great astonishment when dug they proved to be good for nothing. They were all small, and but few in a hill. The strength of the soil and the energy of the plants, seemed combined to make only vines. Do you say there was too much nitrogen in the soil? The plants need not have taken any more than they wanted to make a reasonable amount of vines, and could have found an abundance of materials for the formation of tubers. In other places, it may not be the case, but here I have always had the best success in raising potatoes when planted as early in the spring as the ground is dry enough to work, say the latter part of April or the first of May. Planted this early on well prepared soil and cultivated as long as possible without injury to the tops, a fair crop of potatoes is reasonably sure. Late planted, when the rains come at the right time to save them from drouth, would outyield the early planted; but the rains seldom come at that all-important period of their growth, and the consequence is a light yield. Moreover, the late planted is more liable to be attacked by the blight. Last year a terrific blight struck potatoes in this region, and the tops of late potatoes died as suddenly as if the thermometer had dropped down to zero and the frost had frozen them solid. My early potatoes were ripe when the blight came and received no injury, my late ones when dug had but few in a hill, and these were half rotten. I have tried the "trench system" practiced by the late Mr. Carman, of the Rural New Yorker, and will say more potatoes can be raised by that system than by any other I know of, but it requires considerable more

work, and is not well calculated for large field planting.

According to my experience, good sod ground that has raised potatoes one year will raise a better crop the next. I planted one acre of thick timothy sod ground, broken up in the spring and well prepared. The yield was fair, but the sod did not rot soon enough to give them the full benefit of its riches. I planted the same ground again the next season, and broke up another acre of the sod ground adjoining it, and planted both at the same time. Both received the same tillage, and neither received any fertilizer, but the acre that grew potatoes the year before was much the best. We would suppose that a crop of potatoes would extract from the soil some of its most available constituents, and that the second crop not finding so ready a supply of nutriment would have been poorer than the first and poorer than the adjoining acre, which had been broken up that spring. This experiment has been tried several times, and every time with the result already described. There are two ways to account for the anomaly. In the first place, the ground planted again the second year was in finer tilth than the sod ground, and also had the benefit of the sod that had not fully decayed the first season.

J. W. INGHAM.

SOME RANDOM NOTES.

CURING PEA VINE HAY.

Editor Southern Planter:

I am glad to see that this subject is being ventilated in the *PLANTER*. The methods in the August number, especially the plan of Prof. Soule, do not materially differ from the method I have used for years, and have often detailed. The fact is that cow pea hay, instead of being such a difficult thing to cure, as many think, is really one of the easiest if not meddled with needlessly, and is stored before the leaves get crisp. One point I think should be well brought out. Never let the hay heat in the shocks, as the leaves will then fall in moving it to the barn. Now, that the value of cow pea hay is coming to be recognized, we hear from some that it is injurious to horses. The same thing is insisted on by some in regard to alfalfa hay, yet alfalfa hay is the sole roughage of thousands of healthy horses, and I have kept horses in the finest condition on pea vine hay as the only roughage. A friend in the blue grass section of Tennessee once wrote to me that he visited a breeding farm there and was shown the sleekest lot of yearling colts he had ever seen. He remarked to

the manager, that "our blue grass makes fine colts." "No," said the manager, "blue grass is not in it, for cow peas made those colts." And it will always make slick coats on mules or horses either.

HAIRY VETCH.

Your reply to Mr. Bush in regard to the hairy vetch getting to be a weed reminds me of an answer made by a friend in Maryland to the same question. He said that the hairy vetch had doubled his corn crop, and that any weed that would do this was welcome to a place on his farm.

INTENSIVE TRUCKING.

Our friend, Jeffers, makes rather a queer argument against intensive trucking in winter by artificial means. A gardener should not use skill or means for growing crops out of season because some one in a warm climate is growing the same crops. Up near the great Northern cities men have built greenhouses by acres for the purpose of producing tomatoes, cucumbers and other things out of season, and the finer quality of their product enables them to get larger prices than the products in the warmer sections bring. Right here in Raleigh I have grown tomatoes in January and February, and have gotten much larger prices for them than the Florida product was bringing in our home market right alongside of them. But Mr. Jeffers seems to think that we should do nothing of the sort, but should lose the opportunity to grow these things at a profit in the North and the upper South, because the truckers in Florida are at the same time sending an inferior product to market. My notion has always been that a gardener should use skill in his business and reap the reward of skillful culture. We should get the best reward out of our gardening we can, for we are gardening for our own benefit, and not for others. The Northern truckers were compelled to use skill and glass in the competition with more Southerly growers, and they have shown how a very small area may be made, by the investment of capital and the use of skill in gardening, to produce far larger returns than many times the area in the open ground. The intensive work of the New Bern growers is but the beginning of winter gardening in the upper South, and it is a work that is going to grow. With the increasing scarcity of labor it is impossible for our truckers to crop the wide areas they did a few years ago in the open ground, and the concentration of capital and labor on a small area under artificial heat is a necessity of the business. Our growers are gardening for their own profit, and if by liberal investment and skilful cul-

ture they can beat Florida there is no good reason why they should not do so.

PEAR BLIGHT.

If there is anything thoroughly settled in regard to plant diseases, it is that the pear blight is caused by a microscopic bacillus, which grows downward from the tip of a shoot destroying the young growing cells of the so-called cambium layer. This bacillus has been isolated, and it has been proven that if an artificially grown specimen is inserted in the sap of a young growing twig it will at once grow and produce the disease. So that all this guess work about frozen sap and sun scald is simply nonsense. The presence of bacterial forms in the sap would not prove that they were the cause, of course, but when a certain form of these has been separated from all other forms present, and this form has been introduced into the growing tissues of the trees, and there continues to grow and cause the blight, the evidence is too strong to be longer doubted. If any one will watch his pear trees closely he can detect the first start of the blight near the ends of the twigs, and if then cut out ahead of it, there will be no further blighting of that limb. But if you wait till the leaves are dead and black a much larger part of the limb will be killed. Then if the dead shoots that are cut off are allowed to lie on the ground, the next spring the diseased sap will exude from cracks in the dead wood and the bees will be attracted to it, and then they will carry the germs to the blossoms on the trees and start another infection, for it always starts at the blossoms or the most tender shoots and grows downward. This bacillus is so minute that 150 of them placed end to end would make a line in length about the thickness of ordinary writing paper. And yet they are so numerous in the sap of a diseased limb as to make it look milky to the naked eye. Therefore there is no longer any use to waste time and thought on sun scald or any other imaginary cause, for the cause is as well known as that of small-pox or diphtheria, or any other germ disease of animals or plants.

W. F. MASSEY, *Editor Practical Farmer.*

NUTRITIVE RATION OF PLANT FOOD IN THE SOIL.

DOES IT INFLUENCE OR CONTROL CROP YIELDS?

Editor Southern Planter:

In your last I cited the reader the case of Mr. Z. J. Drake, as proof of the fact that, contrary to the teachings of Messrs. Whitney and Cameron, the great controlling factor in the yield of crops is the amount of plant food in the soil.

The above named gentlemen say: "It would appear from the results given in this bulletin that plants can and do yield ordinary crops (in fact, very "ordinary"), though growing in media containing very small traces of any plant food, while if the amount of these plant foods is increased a thousand times, they are unable to give corresponding increases in the yield." Now, I do not wish to undertake the task of proving that a "corresponding" increase can or will always result from artificial plant foods, even when applied systematically and intelligently, but what I do wish to prove, and what I can readily, unmistakably and incontrovertibly prove, is that their judicious use will give an increase, and a very great and remarkable increase, that no "cultural methods" or "suitable crop rotation" or purely "physical condition" into which the soil could possibly be brought, has ever accomplished or can ever accomplish in their absence; and this in spite of the statement of Messrs. Whitney and Cameron that "practically all soils contain sufficient plant food for 'good' (good thing they did not say maximum) crop yields."

I will now enter into details in regard to Mr. Drake's crop of *two hundred and fifty-five bushels of corn per acre, and how it was made:*

"Late in February one thousand bushels of stable manure and five hundred pounds each of manipulated guano, cotton seed meal and kainit were broadcasted on the acre and then plowed under. Following the plow six hundred bushels of whole cotton seed were strewn in the furrows. A subsoil plow was run through a depth of twelve inches. The land was well harrowed and the rows planted alternately March 2d, three and six feet apart.

"An improved strain of the common gourd seed variety of Southern white dent corn was planted, five to six kernels being dropped to each foot of the row. It was planted in rows five inches deep, but covered only one inch. At first hoeing the plants were thinned to one stalk every five or six inches, the missing spots replanted. On April 20th the six foot spaces were plowed and a mixture composed of two hundred pounds each guano, kainit, cotton seed meal, acid phosphate and bone was applied and hoed in. On May 15th the three-foot spaces were plowed, three hundred pounds of nitrate of soda sown and worked in. On May 25th, two hundred pounds of guano were applied in the wide spaces. Another application of five hundred pounds of guano, cotton seed meal and kainit was put on June 8th, and one hundred pounds nitrate of soda June 11th.

"The crop was harvested November 25th, before

several reputable witnesses. It yielded seventeen thousand four hundred and seven pounds of corn in the ear, of which one hundred and forty pounds was soft corn. Several tests showed that one hundred pounds ear corn yielded eighty-two pounds shelled corn, which made the yield two hundred and fifty-four bushels, forty-nine pounds of shelled corn at fifty-six pounds to the bushel, which, kiln dried, to contain only ten per cent. water, would contain two hundred and thirty-nine bushels."

Now, I am aware of the fact that agriculture is, as yet, far from being an exact science, and that the seeker after truth must be slow to reach positive conclusions, instead of jumping at them; but I cannot help believing that the plant food added by Mr. Drake to his contest acre was, in this instance, the "great controlling factor" that influenced and controlled the yield; and that, exceptionally favorable as the season was, the half of the above yield would not and could not have been obtained had said plant food not been added.

Contrary to the teachings of Messrs. Whitney and Cameron, when they roundly assert that "practically all soils contain sufficient plant food for a good crop yield," is the united experience of the entire farming world, our own included. I, together with many other practical men, experimenters and close observers, have found that, however perfect Dame Nature may be in her operations, she is proverbially slow in her processes; and her sons "art" and "science" have left their venerable yet still highly revered ancestor so far in the rear that she now has all she can do to keep in sight of her young, active and progressive progeny.

Yes, this same progeny have discovered that even the very richest and strongest of soils may be still farther enriched and improved upon. Man's life here below is altogether too short for him to fritter it away in the vain effort of studying out "physical factors the exact nature of which is yet to be determined," in their relation to crop yield, while there is so much exact and positive data, reliable data at that, the exact nature of which has already been worked out.

Whenever a soil is well supplied with plant food, either natural or artificial, or both, whenever a soil is well supplied with organic matter, whenever the crop is adapted to the climate, good seed planted, the soil moderately deeply prepared and the crops thoroughly cultivated, with the rainfall neither deficient nor in excess of crop requirements and with climatic and seasonal conditions favorable, success in the way of maximum crop yields is assured. There is no mys-

tery about it. No "physical factor the exact nature of which is yet to be determined."

The puzzle with the average agriculturist is not so much to find out the various "physical factors" or chemical or climatic or seasonal factors that influence crop yields, as it is to bring as many of the favorably influencing or controlling factors together as possible and bring them to bear on his own individual case. What man has done, under similar circumstances, can be done again, the puzzle being, how to bring together those "similar circumstances." They seem to be as elusive as are the undetermined "physical factors" of Messrs. Whitney and Cameron.

Gomez, Miss.

G. H. TURNER.

THE WHOLE SYSTEM OF FARMING AS PURSUED BY THE AVERAGE COTTON RAISER RADICALLY WRONG.

"A. C. K." (A Chronic Kicker).

Editor Southern Planter:

It is needness for us to try to enlighten the cotton raiser as to the system (or lack of system) pursued by himself, his daddy, and his grand-daddy, before him. They are all well posted along this line; they have also seen the evil results following from this system in the way of eroded, washed away and worn out fields, impassable gullies, depleted fertility, and, as a perfectly natural result, annually decreasing yields per acre, per hand, and per farm. Everything, even down to the manufacture, sale and use of the various improved implements, simply tends toward a still greater and more complete depletion of the fertility of our soils. What are we going to do about it? Is it not time to call a halt, and revolutionize a system that has brought nothing but destruction in its train?

Many good men have realized this destruction, as evidenced by the various remedies proposed, as, for instance, the "raising of live stock" of various kinds, "diversification," etc.; all of which advice is good, in some instances, but utterly useless because impracticable in others. Let us take "stock raising," for instance, which has been so often so extensively and so strenuously advocated as a panacea, a cure for all the ills of a poverty stricken soil, as well as of a poverty stricken "rural population." Is it a remedy for the existing evil? We deny it. If a remedy at all, is it of universal application (if not, it is a failure as such)? In many thousands of instances it is utterly and entirely impracticable; and even if "practicable," would be without efficacy. In a country where cattle can roam in the fields and pastures 300 out of the 365 days in a year, thereby making their own living for the 300 days, is it to be expected that a man should build expensive barns, with cement floors, and keep

his cattle housed the biggest half of the year, feeding them, watering them, and cleaning out their stables, etc., just for the fun of handling a few extra loads of manure annually? If so, where would be the advantage of living in a clime where forage is abundant and shelter comparatively unnecessary. And if this exceptionally favorable climate is taken the advantage of that could and should be taken where, oh, where, is the benefit to the cotton fields from the keeping of live stock as a fertilizer factory. Theory is one thing, practical experience another; aside from a few dairy farms (where more or less feed was annually purchased from abroad), we have yet to see a single instance where the fertility of the entire farm was even maintained, much less increased by the keeping of live stock.

For fully one-third of a century we have been engaged in the raising of cotton as a "cash crop," but while this is the case, we have always believed in and practiced such a "diversification" of crops as should render us practically independent of the entire outside world, so far as the "necessaries," and even many of the "luxuries" of life are concerned; we also try to raise a sufficiency of live stock of most all kinds to abundantly supply the needs of our own individual farm; we save the manure, but owing to pasturing everything, even our meat hogs, almost the entire year, have but little to save, and from both an extended experience and extensive observation, know that there are hundreds of thousands of our cotton raisers in the same fix. The remedy, then, and the *only* remedy for our depleted soils, or at least the only remedy that is practicable alike to all, and of universal applicability, is to so rotate our crops as that the same crop shall never be allowed to follow itself on the same land for two consecutive years; and to so arrange said rotation that fully one-third of the total area planted shall be devoted to some one of the leguminous crops, as cow peas, clover or vetch. As the leading object in the raising of leguminous crops is (or should be) the maintenance or increase of fertility, the more luxuriant the growth of the recuperative crop, the greater the amount of plant food furnished by it to the succeeding crop; hence to bring about an increase of fertility in any given soil, it is not sufficient simply to sow the land down to cow peas or clover, but everything should be done that can be done toward ensuring the most luxuriant growth possible, and for the furtherance of this object, the plants must be fed. Each and all of the leguminous crops are greedy consumers of potash and phosphoric acid, and where these are deficient (which is invariably the case in all old, well worn soils), but little growth of the recuperative crop will take place, but little nitrogen will be attracted from the atmosphere, but little actual recuperation take place. When 300 to 600 pounds of a fertilizer containing 8 per cent. each of

both potash and phosphoric acid is applied to each and every acre of cow peas planted, an increase of from 50 to 100 per cent. in the yield of the succeeding crop of cotton may be reasonably expected and confidently looked for, even without the direct application of fertilizers to the cotton crop; but when, in addition to fertilization of the peas, the cotton also is fertilized direct with from 400 to 800 pounds of a fertilizer analyzing about "3-8-4" for ordinarily fertile soil, or "10-4" (omitting nitrogen) for very rich soil (or those producing excess of weed) double speed in fertilization is made, and the crop yield may be doubled, trebled or even quadrupled.

Whilst there is great truth in what A. C. K. says as to the bad system of farming amongst cotton raisers, we cannot agree with him that live stock husbandry is not largely a remedy for this. There is no place in the whole world where live stock can be raised, grown and fattened as cheaply as in the South if a proper system be adopted and followed, and there is no place so near to the largest and best markets of the world for meat and dairy products. With such a conjunction of circumstances, live stock husbandry can be pursued successfully, and is bound to result in improvement of the land and profitable crops.—Ed.

LARGE YIELD OF WHEAT IN HALIFAX CO., VA.

Editor Southern Planter:

An esteemed neighbor, Mr. Newton A. Tulloh, made a very fine crop of wheat this year, the yield surpassing anything I have ever known in the State. He is so modest he will not write you himself, so I venture to rise and write for the benefit of others on how he secured such a phenomenal yield:

He seeded five acres, and the yield was a little over forty bushels to one sown. From the five acres a crop of clover was cut last year; he then fallowed the land with a four-horse plow, pulverized the soil with disk harrows and then dragged it thoroughly and sowed the land in peas, as every farmer ought to do, then fallowed the field preparatory to seeding it in wheat. With the land thus nicely prepared the wheat was sown. During the winter—which was an exceedingly cold one—when the land was frozen, Mr. Tulloh would haul out his barnyard manure and spread it over the field, thus saving it from the severity of the cold.

There are many other farmers in our State who can do as well doubtless, and I hope they will try.

Halifax Co., Va.

SAMUEL L. ADAMS.

We would refer readers to our remarks on the proper preparation for a wheat crop in our article, "Work for the Month." There is danger in plowing down a pea crop as a preparation for wheat unless it is done very early.—Ed.

ENQUIRERS' COLUMN.

Enquiries should be sent to the office of THE SOUTHERN PLANTER, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

Feed Value of Wheat, Rye and Oat Hay Compared With Clover Hay—Feed Value of Buckwheat.

Will you, in your next issue (August), please give the relative feeding ratio in protein, carbo-hydrates and fat of wheat, rye and oat hay, as compared with good clover hay? Please give them separately and not as a mixture of the three cereals. Please give also the feeding value of whole buckwheat for horses, cows and hogs as compared with corn and bran. If you have or can procure any statistics from which you could give the approximate weight of the hay per acre of the cereals where the growth is medium length you would confer a favor on

Richmond Co., Va.

INQUIRER.

Although we have tables giving the analysis of hundreds of different feeding plants, grains, tubers and other food stuffs, and the reports of the analyses made of different kinds of roughage at the various Experiment Stations since they were established, we cannot find amongst all these an analysis of the composition of wheat hay or rye hay. We find oat hay cut when in the milk stage to contain 9.3 protein, 39.0 carbo-hydrate, and 2.3 fat. Red clover hay contains 12.3 protein, 38.1 carbo-hydrate, and 3.3 fat. We will look further into this matter, and, if possible, secure the information desired and publish later. We have numbers of analyses of the grain, straw and chaff of these cereals, but it is evident that as hays they have been little investigated. Buckwheat contains 10.0 protein, 64.5 carbo-hydrate, and 2.2 fat. Corn, 10.5 protein, 69.6 carbo-hydrate, 5.4 fat. Bran, 15.4 protein, 53.9 carbo-hydrate, and 4.0 fat.

We have no statistics giving the average weight of hay per acre made from the cereal crops, but should estimate same at probably about two tons to the acre.—Ed.

Yield of Rye in Virginia.

Referring to our editorial note in the August PLANTER, about the yield of rye in Virginia, Mr. H. L. Trollinger reports a yield this year on "Buena Vista" Farm, in Pulaski county, Va., as follows:

Twelve acres rye threshed out 345 measured bushels, or an average of 28 3-4 bushels per acre; five acres (adjoining) barley 167 bushels, or 33 per acre. The rye and barley grew on a strip of branch bottom containing 17 acres. The barley, before being cut, looked apparently not very good (having been frozen

out somewhat last winter), and the yield was a surprise to us. The rye was as fine a stand as we ever saw, and we expected 20 bushels per acre, but were greatly surprised at the big yield. We think fully 20 bushels wasted and left on the ground by blowing down and not cut by the binder. We got a good set of clover and timothy with both the rye and barley. Our average yield of rye has been for several years about 12 bushels per acre.

L. P. STEARNES.

Warwick Co., Va.

Sun Cured Tobacco.

1. Can tobacco grown on gray land be sun cured profitably in this section?

2. Will it heat in handling and marketing?

Please give process for sun curing tobacco.

Campbell Co., Va.

C. A. FERGUSON.

1. We doubt very much whether tobacco grown in Campbell county Va., can be profitably cured as sun cured tobacco. Attempts have been made in several counties outside the sun cured tobacco section to cure tobacco so that it would compete successfully with the tobacco of the sun cured section, but the market always discriminates against it, claiming that whilst in appearance it compares favorably, yet that it lacks a "something" in use which can only be found in tobacco grown in Caroline and adjoining counties. We do not advise the attempt. Grow a type of tobacco suited to your section and cure accordingly and aim to make it the best of that type, and it will sell on its merits.

2. Genuine sun cured tobacco should be cured on the scaffold in the field and finished off by air curing in the barn. If properly cured it will not heat in handling and marketing any more than tobacco cured by fire.—ED.

Alfalfa.

1. I have about three acres of river bottom sandy and damp, but not wet. It also has sorrel. I have it now in soy beans. Would you advise me to sow in alfalfa?

2. Will the soy bean inoculate the ground for alfalfa?

L. H. HARRIS.

Lee Co., Va.

1. We have very little doubt but that the land would grow alfalfa. When you have limed the land and made it rich enough to grow alfalfa the sorrel will disappear. It is an evidence of the want of fertility in the soil, and of an acid condition, which lime will rectify.

2. The soy bean bacteria is not available for inoculating for alfalfa. You must get alfalfa bacteria.—ED.

Inoculation for Legumes—Vetches.

1. Give methods of inoculating and bacteria cultures for each of the principal leguminous crops, including alfalfa and vetch.

2. Will the germ die in unimproved soil when no fertilizer is used?

3. What will the preparations cost and best place obtained?

4. What is the best paying variety of Pecan for this section? How far apart should they be planted when set alone? Also distance with pears between, best fertilizer, and how much used locally?

5. What do you think of vetch as horse food sown in fall with rye or oats?

6. Will this cure well when cut with binder and allowed to stand in small shocks?

7. Can a fair crop be raised on gray land (without fertilizer), producing five barrels of corn per acre?

8. Does it impoverish land growing this crop for hay, and what is the value of vetch and rye grown on such land for fallow?

9. Will one or two subscribers answer this question for a Western farmer subscriber, "Why is land so cheap in this old country, so often spoken of as 'God's Country'?" Would like to have this answered fully.

Dinwiddie Co., Va.

C. A. L.

1. The bacteria for inoculating most of the leguminous crops can be had from the Department of Agriculture, Washington, free of charge. This means that sufficient can be had to inoculate the seed required to sow a small plot. After this plot has produced the particular legume inoculated for, then soil from this plot can be used to inoculate seed for a large area. The land is inoculated either by infecting the seed with the bacteria by mixing same with some soil and water and then mixing the seed with this or by mixing same with soil and spreading the soil on the land, and then sowing the seed. Or the land may be infected by getting a bag of soil from land growing the particular legume desired and spreading this soil on the land desired to be infected. One hundred pounds of infected soil will inoculate an acre.

2. The bacteria will continue to increase in the land if the particular legume to which it is peculiar is grown on the land either continuously or at no greater intervals than two or three years. The presence of the particular crop and not fertilizer is essential to the continuance and spread of the bacteria.

3. See reply to No. 1.

4. So few Pecans have been grown in this State that it is not possible to answer this question. The growing of Pecans so far north as Virginia as a commercial crop is yet only in the experimental stage.

We would not advise any one to plant more than a few trees as an experiment. We have reports of isolated trees in different parts of the State bearing freely, but whether they will pay when grown in large orchards remains to be seen.

5 and 6. The Hairy Vetch and the English Vetch both make excellent forage crops grown in mixture with oats or rye, but especially with oats, which are a much better feed than rye. The best way to harvest the crop is to cut it with a mower like a hay crop and cure like curing clover hay.

7. Land such as this would not produce a heavy crop unless helped with some acid phosphate or manure.

8. The growing of vetches improves land in so far as they add nitrogen and humus to the soil, but they like all the legumes are large consumers of phosphoric acid and potash, and unless there is an abundance of these in the soil or they are applied freely, the crop will not make a heavy growth. They make good hay and an improving fallow.—Ed.

Lime Spreader.

Please let me know where I can find a manufacturer of a lime spreader, as I want to buy one.

Bedford Co., Va.

A SUBSCRIBER.

The Kemp & Burpee Manufacturing Co., Syracuse, N. Y., and the Smith Manure Spreader Co., Chicago, both of whom are referred to in this issue, make machines which will spread lime.—Ed.

Grubs in Nostrils of Sheep.

I have lately killed for food a number of lambs that were dropped in April. They are fat and good, but I find in the noses of each one or more grubs. Can these grubs be removed or kept out in any way? I have them running in old pasture.

Bedford Co., Va.

H. S. HUBBARD.

The grubs found in the nostrils are the larva of the sheep bot fly. This fly, which is almost like a small bee, will be found buzzing about the sheep and causing them great alarm. They will seek to hide their heads in bushes or grass, as they know instinctively that the fly is seeking their nostrils to deposit the egg, which almost immediately hatches into a grub. This grub has a pair of hooks on its head, by which it makes its way up the nostrils and attaches itself to the membrane lining the cavity of the skull, where it spends about three-fourths of the year, emerging when fully grown and falling to the ground, where it makes its way into the soil, and in the warm, early summer changes into the fly which at once begins its work of pestering the sheep. Unless the grubs are very nu-

merous they do not seem to cause the sheep much injury. They are usually more a source of annoyance, causing sneezing and restlessness than actual injury. Many of the grubs are ejected by the snorting and sneezing of the sheep. Sometimes, however, the grubs get fixed so far back in the membrane of the skull lining that they cannot be forced out, and then cause brain trouble and serious danger to the sheep. There is no practical means of completely preventing the attacks of the fly. Tarring the nostrils of the sheep frequently during the summer is the best that can be done. A mixture of tar and fish oil is better than tar alone as a preventive. The grubs may be usually removed by syringing the nostrils out with a syringe made specially for the purpose, which has a long bent tube or nozzle. A mixture of linseed oil and turpentine in equal parts is injected through this springe, and usually brings the grubs away. Where the grubs become fixed in the skull and serious danger is threatened and they cannot be got out with the syringe, the operation of trepanning is resorted to. This involves the cutting of a hole through the skull bone and the removal of the grubs by means of forceps. All sheep and lamb heads, from dead or slaughtered sheep, should be burnt at once, as they almost invariably harbor grubs, and the flies are hatched from them and increase the trouble. The syringe required can be obtained from dealers in veterinary instruments, and probably from Marvin, Smith & Co., of Chicago.—Ed.

Nitrate of Soda for Cabbage.

I have cabbage plants set for fall and winter use, and wish to apply nitrate of soda, 300 pounds to the acre in three applications. Please advise whether to apply on top of soil or on one side of plant and then cover. Have used light application of dry, ground fish and kainit in drill.

W. L. RUSSELL.

Northumberland Co., Va.

Apply the nitrate down each side of the rows on the top. It will melt as readily as salt, and find its way to the roots without any cultivation.—Ed.

Protecting Hams from Skippers—Raising Chickens.

As you asked a remedy for keeping skippers from hams and shoulders of hog meat, I will tell you how we do. When the hams and shoulders are taken from the pickle, place them on a table or board to drain. Wipe them off with a cloth, take whole pepper and grind. Take good sorghum molasses and rub over the flesh side with your hand, then put the pepper over it, again rubbing with your hand, and when dry bag them. When you want one for use take it out of the sack and wash with soap and water.

Then rinse off with clear water, hang up uncovered, and you will have nice meat.

My way of raising chickens. When taken from the nest, give them three swallows of water, feed them cooked food six or seven times a day, giving pure water twice a day. Never had any die of gapes. Starvation and uncooked food cause gapes.

Wood Co., W. Va.

MRS. J. Y. SMITH.

Vetch—Alfalfa.

1. Will you please let me know what kind of vetch will be best to sow? Expect to sow about the 10th of September. Soil is medium light. What will be the best kind of fertilizer to use, and how much to the acre, and wouldn't it be well to sow some oats or wheat with them to keep them from falling down, and how much to the acre?

2. I also wish to try a small piece of alfalfa. When would be the best time to sow, and how much to the acre?

H. J. ROSBACH.

Hanover Co., Va.

1. Sow Hairy Vetch from September to the middle of October, and English Vetch from the middle of October to the middle of November. Sow 25 pounds of Vetch seed and three-quarters of a bushel of winter oats, rye and wheat in equal parts per acre. Apply 300 pounds of acid phosphate per acre.

2. Sow the first week in September, 25 pounds to the acre.—Ed.

Soja Bean or Corn.

1. Can as many soja beans be raised to the acre as corn?

2. Are they as good a feed for horses as corn?

3. Will they do as well to fatten cattle as corn?

4. Which had a farmer and stock raiser best grow, the soja bean or corn?

5. Is soja bean straw after they have been threshed as good a feed as corn fodder? W. M. HEATWOLE.

Rockingham Co., Va.

1. No. Soy beans will not usually make more than 25 or 30 bushels to the acre.

2. They are valuable as a feed for horses, cattle, sheep and hogs, but should not be fed alone. They are rich in protein (the muscle and flesh forming matter), and when fed with corn supply what that grain lacks in this respect. Corn is a carbonaceous food making fat and supplying heat and needs protein added to make it a complete feed. Much better results will be had from feeding the mixture than from corn alone.

3. See No. 2.

4. A farmer and stock raiser should grow both in order to get the best results.

5. No. It is a harder and rougher feed and stock have to become accustomed to it before they will eat it freely. They are fond of it when used to it.—Ed.

Dehorning Cattie.

1. Is there any danger in dehorning old cattle?

2. What is the best dehorner?

3. When best time for the operation? I never had any experience dehorning. Have about fifty head to dehorn before winter; would be glad of any information you deem necessary for a beginner.

4. Can you give me the address of some manufacturer of pure bone meal.

R. M. LEWIS.

Mecklenburg Co., Va.

1. No; not unless done when flies are troublesome and care is not taken to keep them out of the wounds.

2. The H. H. Brown Manufacturing Co., Decatur, Ill., and M. T. Phillips, Pomeroy, Pa., both make good dehorning instruments.

3. Either before flies have become troublesome or after they have gone, but not in the coldest weather of winter. Have some tar on hand and cover the stump of the horn and around it with this after the horn has been removed.

4. We do not know any local maker of bone meal, but you will get it as cheap from the seedsmen who advertise in the PLANTER as from the makers.—Ed.

Alfalfa.

I have four (4) acres in front of my home that I am anxious to get into a permanent grass plat, and alfalfa is my great desire, if this land can be made to grow it. The soil is gray top soil and clay subsoil. Two years ago when I bought it, it was in wheat. Last spring it was well covered with stable manure, which was well worked in. Then it was sowed to peas, which made a tremendous growth. The vines were cut for hay, and the roots and about six inches of vine were turned under for green manure, having been limed first to prevent souring. The plat was then sowed, with disc drill, to winter oats, orchard grass and clover, with 350 pounds bone meal to the acre. I threshed 180 bushels of oats from this field this season; but there is a miserable stand of grass; and the field has been taken possession of by weeds. Now, if I fallow and subsoil this plat now, harrow, plough and reharrow several times, work in 20 bushels lime to the acre and 500 pounds bone meal and sow 20 pounds alfalfa, thoroughly inoculated with alfalfa bacteria from Agricultural Department, will I be likely to get a good stand, if I sow alfalfa by the first week in September? Or, would you advise simply experimenting with one acre? I am anxious not to lose this year's time, and yet do not wish to put the money in four acres unless there is a good chance

of getting a stand. Every one in this neighborhood is interested in alfalfa and anxious to see some one make a stand. Is acid phosphate as good as bone meal for alfalfa?

L. L. L.

Pittsylvania Co., Va.

We are of opinion that if you treat this land as you suggest that you will be able to get a good stand of alfalfa. It is very probable that you may have trouble with the weeds the first year, but if you take care to cut the alfalfa several times, leaving the cutting as a mulch we think that the growth of the alfalfa will be vigorous enough to smother down the weeds, as the land is in a good state of fertility. As a source of phosphoric acid the acid phosphate is as good as bone meal, but the bone meal is also a source of nitrogen, having 4 or 5 per cent. of that element, which is not to be found in the acid phosphate. The phosphoric acid in bone meal is slower in action than that in acid phosphate, and is therefore more desirable for a grass or clover crop, which will hold possession of the land for a number of years.—ED.

Breed of Sheep for Low Country—Winter Oats.

1. I am making arrangements to start a small flock of sheep on a farm in Wicomico county, Md. I want a breed that will shear well, and that will mature a good crop of lambs each season for our local market. Of course, it is my intention to give the flock the best attention. I have a theory that all breeds of sheep do best in a high altitude. Am I correct in this. If so, is there a breed that flourishes to a greater extent than all others in a flat country such as the Maryland-Delaware-Virginia peninsula is? Such a breed would be the one for us, I think.

2. Would winter oats be a safe crop to seed in this latitude, which is about the same as that of Culpeper and Stafford counties, Va.? If so, what varieties would best suit the conditions. Spring seeded oats do well here, but so far as I know, there never has been a trial of winter oats in the county. What is the superior advantage of winter oats over spring seeded oats?

C.

Wicomico Co., Md.

1. You are no doubt correct in believing that nearly all breeds of sheep do best in a moderately high, rolling country. To do well sheep must have dry feet and dry sleeping quarters. In England there are two or three breeds which have been acclimated to low lying sections of the country, but they are practically unknown here. In our opinion the breed which will best meet your conditions is the Shropshire. They have become thoroughly acclimated in this country, and breed lambs that always sell well on any market. They make a good fleece

and good mutton. They do well in Eastern Virginia when properly cared for, and we think cannot fail to do so in Maryland.

2. We know of no reason why the Virginia Gray Winter Oats should not succeed in your section. Your climate is very like that of sections where they do well in this State. The advantage of the winter oat is that it makes a better yield of heavier oats than spring varieties do in the warm climate of the South. It grows and matures in the cooler part of the year, and the oat being naturally a cool climate crop, this one best suits our climatic conditions.—ED.

Home Brewed Beer.

Can you give me, through the columns of the *PLANTER* or otherwise, a receipt for making the old-fashioned English home brewed ale and beer. This is more a question of the home comfort of the agriculturist than it is of advancement in agriculture, but I trust you will consider it within the province of your paper to reply.

W. H. CALHOUN, JR.

Ashe Co., N. C.

When a boy at home in the "Old Country," "brewing day" was as regular an event as "baking day." Home brewed beer was always on draft in the cellar and served on the table at dinner time every day. This was the custom in the homes of both rich and poor in my county. This is now so long ago that I have forgotten the proportions of water and malt used. This, however, I do know, that the proportion of water used was large for the quantity of malt, for no one was ever known to become intoxicated with the beverage, and yet it was wholesome and nourishing. The only ingredients used in making the beer were barley malt, hops and water, and it was fermented with yeast, the custom being to save yeast from one brewing to another for this purpose. The malt was put into the mash tub, and water, which had boiled and then just had the boiling checked with a dash of cold water, was poured upon it, and the mash allowed to stand an hour or so, when the liquor was drawn off into another tub and put into a large fixed iron pan with a fire under it and boiled for a certain time, a few pounds of hops being added to give it a slightly bitter taste. After boiling the liquor was cooled, strained, and then set to ferment in a large tub, yeast being added to start the fermentation. After fermenting 24 hours the beer was then put into barrels and kept in the cellar, where it was cool, being drawn from as required.—ED.

Frog Farming.

Can you give me any points about frog raising,

and whether it would be remunerative? I live on a large farm, and think I might utilize a piece of swamp land, and as I live about fifty miles from Washington, thought there might be demand for frog legs at the large hotels.

A SUBSCRIBER.

Fauquier Co., Va.

We must frankly confess that we know nothing about frog farming or its potentialities for profit. Possibly some of our readers may know something about it. If so, please reply.—Ed.

Vinegar.

Can you or your readers tell me how to keep vinegar to have it strong for a long time?

Chesterfield Co., Va.

H. DEWHURST.

The vinegar after it is sour should be drawn off into clean casks or bottles and be sealed up tightly, and it will keep its sourness indefinitely.—Ed.

Removing Stumps.

Could you please give me advice in the September issue of the *PLANTER* as to which is the safest and cheapest way to blow out stumps, mostly white oak, from 10 to 20 inches in diameter, trees having been cut down for several years. Should you advise dynamite, then please let me know how same must be handled and where it can be bought, and in what amount and price.

A SUBSCRIBER.

Lunenburg Co., Va.

Dynamite is the safest, surest and cheapest means to use to remove stumps. Twenty cents' worth of dynamite will remove any one of such stumps as you mention when properly applied. It requires some practice, however, to know where best to place the charge. Usually the best way is to bore a hole into the stump near the ground and between the main roots. Use an augur with a lang shank and bore the hole about one-eighth of an inch larger than the diameter of the cartridge of dynamite, so that it will go in easily. One cartridge is usually sufficient, but in an old, large stump two are more certain. Bore the hole well into the centre of the stump. Before inserting the cartridge insert the exploding cap and fuse and then push the cartridge home and tamp solid with soil, tamping gently at first and more firmly as the hole is filled. Let the fuse extend a foot or eighteen inches beyond the hole, and after lighting it get 100 yards away. It is as safe an explosive as can be used, and with ordinary care in handling no accident need occur. Write Southern Railway Supply Co., whose ad. you will find in the *PLANTER*, for price of dynamite, telling them the purpose for which you want it.—Ed.

Staining a Floor.

I have a pretty white pine floor in my house. I find it next to impossible to keep it clean.

1. Please tell me some good preparations for coloring floors. I prefer something that will not make them very dark?

2. How much must I get for a room 18x20 feet.

MRS. W. T. HENLEY.

King and Queen Co., Va.

The paint and drug stores sell staining of various shades for this purpose. Write the Tanner Paint & Oil Co., Richmond, for particulars of these and quantity necessary. Say we referred you to them.—Ed.

Johnson Grass.

Next spring I propose to put in Johnson grass several acres of my farm, and in the meantime would like to get the experience of others who have grown this grass north of Richmond, Va. What I wish particularly to ascertain is the effect of our northern winters upon it. Will it withstand our frost?

District of Columbia.

R. S. LACY.

Will some reader who has had experience in the section referred to please reply. We know there are numbers of farmers in that section who have tried the grass.—Ed.

Seed Oats and Wheat.

Please answer in next issue whether it is better to sow now the winter oat from the fall or spring seedling, and if it would not pay to get our seed wheat from a limestone section? Can you recommend a person or locality from whence same can be procured?

Mecklenburg Co., Va.

C. B. CROWDER.

Sow winter oats from a fall seeded crop. It would probably pay to get seed wheat from a limestone section, if not too far away from your section. The best crops are usually made from seed acclimated to the section where grown. See our advertising columns for the names of parties offering seed wheat and oats.—Ed.

"Can Alfalfa Be Made Into Good Silage?"

The above question asked you in the July *SOUTHERN PLANTER* is fully answered in Farmers' Bulletin, No. 124, which can be obtained by writing to U. S. Department of Agriculture. This bulletin says it can.

R. L. WALDROP.

Mabelton, Va.

The bulletin referred to contains a report of a small experiment made at the Colorado Station, which was a comparative success. There does not appear, however, to have been any practical work on this line on a large scale anywhere.—Ed.

Grass Seeding.

If convenient and space permits, would like to have you advise, through the *PLANTER*, the best method to put about 100 acres in grass for pasture this fall, if possible; 30 acres upland wheat stubble, 50 acres upland oat stubble, 20 acres bottom, in corn now. Some very poor spots we intend to manure. It is quite a distance from the barns, so will probably have to use fertilizer and lime on all of it except probably the bottom land. Any advice you can give us will probably interest others, as a great many in this section intend to seed down pasture. Would also like to know the best seed and quantity for permanent pasture. The soil is rather heavy, part red, part gray, clay subsoil.

ELKTON STOCK FARM.

Bedford Co., Va.

In our August issue in the article "Work for the Month" we wrote somewhat fully on the subject of seeding to grass, and to this article refer the enquirer. The wheat and oat stubble can well be seeded this fall. It ought, if possible, to be done this month, so that the crop may get well started before winter. Prepare the land as finely as possible by plowing and frequent working with the harrow (the cutaway or disc is best), roller and smoothing harrow. Apply lime, say from 25 to 50 bushels to the acre, after plowing and work this in. Then just previous to sowing the seed apply from 3 to 500 pounds of bone meal to the acre, and work in. *Sow grass seeds alone* without a grain crop, and cover lightly by rolling if dry enough, followed by the smoothing harrow. For pasture mix orchard grass, tall meadow oat grass, herds grass, meadow fescue, Virginia blue grass and perennial rye grass in equal parts by measure and sow at the rate of 3 bushels to the acre, adding also 5 pounds of alsike or red clover per acre. The corn land cannot be seeded with a fair prospect of success this fall. Sow it in crimson clover, wheat, oats and rye mixed for winter and spring pasture. Plow down in spring and sow to peas and then sow grass in the fall.—ED.

Selection of Seed Corn—Barren Stalks.

If there are two or more ears of corn on a stalk, would the top or bottom ear make the best seed? and does it make the seed worse to allow stalks that have tassels and no ears to remain in the field, or should they be cut out?

W. H. CLARK.

Patrick Co., Va.

It is usually best to select the bottom ear as seed from this ear is likely to induce the habit of earing nearer the ground and reducing the height of the corn. All corn grown in the South has a tendency to grow too tall, thus expending plant food in the pro-

duction of stalk at the expense of the ear. This tendency it is desirable to counteract by selection. The tassels of all barren stalks should be cut off before they disseminate pollen. If this practice was consistently followed by all corn growers the percentage of barren stalks in corn crops could be rapidly reduced and the yield of crops be largely increased.—ED.

Patent Fertilizer Lime.

Will you please advise me through the columns of your paper as to the advisability of using "patent process fertilizer lime," as per enclosed pamphlet, in the place of acid phosphate and potash, on a pea stubble for wheat?

What relation has this lime to the old agricultural lime and to land plaster, as to results or action on the soil? If the same, is the quantity suggested, 250 pounds per acre, sufficient? What would be the result if used with other fertilizers? A SUBSCRIBER.

Culpeper Co., Va.

The Ohio Experiment Station has conducted experiments with this so-called hydrated lime in comparison with common lime, and reports as follows: "We have as yet no reason to believe that the so-called 'fertilizer lime' possesses any virtues not found in common lime."

Lime is not strictly a fertilizer, and cannot be made to take the place of plant food in the form of manure or fertilizer. Its beneficial effects arise from its power to make inert plant food in the soil available, and to its action on the physical and mechanical condition of the soil. Lime in any form should not be used immediately in connection with commercial fertilizers or farm-yard manure. Used in connection with fertilizer it has the effect of reverting the phosphoric acid into an insoluble form, and in connection with manure of releasing the ammonia.—ED.

To Prevent Skippers in Hams.

I see several inquiries in the *SOUTHERN PLANTER* as to keeping skippers out of hams. For sixteen years I have cured from one hundred to one hundred and fifty hams per year, and have not had a skipper on any of them. When you take the meat out of the salt to hang it, clean off the loose salt and apply pulverized borax to the cut parts freely. Skippers will not bother the meat if kept in a light smokehouse. A large baking powder can with holes in the top is a good thing with which to apply the borax. I have never had any complaint from my customers, and the hams do not show that the borax has been used, and it is not injurious. All the farmers in this section of the country use this remedy, and there is very little loss from skippers.

ALEXANDER BLACK.

Montgomery Co., Va.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

The work of harvesting and storing or shipping the various fruit and root crops will require constant attention this month. Do not allow fruit to hang on the tree until it has become overripe, nor allow root crops to remain in the ground after they have matured. The sooner they are gathered after they are ripe or matured enough to keep the better they will keep through the winter and the nicer condition they will be in when shipped to market. All fruit and root crops pass through a "sweat" after they are gathered, and they should not be stored for winter keeping until this "sweat" is over. Place them under cover in any airy, dry place in small piles or heaps until they have ceased to sweat, then carefully sort them over and take out for immediate use all damaged specimens or those giving indications of early decay. Only perfectly sound fruit or tubers of any kind should go into winter storage or be shipped to market. Apples and pears keep best stored in slatted bins or ventilated barrels in a dry, airy room, where an equable temperature well above the freezing point can be maintained. Irish potatoes, turnips, beets, mangels and carrots keep well stored in dry cellars well covered with straw, or made into pies or kilns on high dry ground, and well covered with straw and soil sufficient to keep out rain and frost. Onions keep best stored on slatted shelves in a dry, airy room or shed, where the temperature will not go down below the freezing point. Sweet potatoes require to be kept at about 45 or 50 degrees, and should be well dried off by a higher temperature than this before being closed up for the winter. In the absence of such a warm cellar as this, they may be kept in kilns or pies well packed in pine tags or dry sand and covered thickly with straw and soil.

Prepare the land for and sow kale and winter spinach in the place where the crop is to grow to maturity. These crops do not require the land to be over rich or they make too tender a growth to stand the winter frosts, yet they require a fair supply of plant food to push them into growth in time for early shipping North or for home use in the early winter months. Sow in drills 2 feet apart and do not sow too thickly.

The fall crop of cabbages and broccoli should be set out and pushed in growth by cultivation and the ap-

plication of a top dressing of nitrate of soda, 100 pounds to the acre. They should begin to head up in October and complete their growth by November.

Seed should be sowed towards the end of the month for the crop of early spring cabbages. The best variety to sow is Early Jersey Wakefield. Do not make the seed bed too rich. Short, stout, stocky plants are what is needed, ready to set out in October and November.

Potato onion sets should be planted out this month on rich, well prepared land. Set in rows 15 or 18 inches apart and 6 or 8 inches apart in the rows. These make the earliest green bunch onions for spring, and a crop of dry onions which will mature for market before any of the seed varieties.

Seed may be sowed towards the end of the month in beds to raise plants of the different seed onions for setting out in the spring. Sow the seed thinly. Southport White Globe, Pearl, Yellow Danvers and Red Wethersfield are good varieties.

Seed should be sown in beds to raise lettuce plants for setting in cold frames for winter cutting and for plants for spring planting. Sow where the plants can be protected by mats or brush in winter.

Strawberry plants may be set out in this and the following month. Prepare the land well and give it a good coating of farm-yard manure, 300 pounds of cotton seed meal and 300 or 400 pounds of acid phosphate and 100 pounds of muriate of potash to the acre. Set the plants in rows 18 inches apart and 15 inches apart in the rows. Make the holes large enough for the roots of the plants to be well spread out and press the soil firmly to the plants, leaving the crowns of the plants just above the level of the soil.

Clean up all trash, vines and vegetable refuse, and either burn the same or compost with hot farm-yard manure, so as to destroy weed seeds and fungous germs.

Sow crimson clover or hairy vetch on all land not wanted for winter crops, so as to conserve and improve the fertility of the land.

HISTORY OF THE PEACH.

Editor Southern Planter:

The peach has an interesting history. Whence came the long list of over 300 varieties we now have in cultivation? Why is it that we have varieties now in cultivation peculiarly adapted to the citrus belt, but will not fruit at all in more northern climates? Also, why is it that we have varieties hardy in bud and sure bearers in the middle States, but will not bear at all in the citrus belt? The reasons are clearly brought out in the story of the peach's history. Therefore this history is not only interesting because it is about one of our most important luscious fruits, but also because most important lessons in regard to the culture of the peach may be learned from its history. We have made a classification of the peach into five races, based largely upon the origin and history of the varieties. Since this classification became known more sure bearing orchards have been planted in the Southern States, where peach culture is now developing most rapidly.

The origin of the peach is shrouded in mystery. One author states that it was evidently in the "Garden of Eden." It was known to Theophrastus 332 years B. C. Its congener, the almond, is mentioned in the Bible as occurring in the days of Jacob. Alphonso de Candolle claims that the peach originated in China instead of Western Asia, as commonly supposed. Importations of peach stones, he claims, from China into Bokhara and Persia very possibly took place. That the peach originated from the almond, as advocated by Knight, is refuted by De Candolle on the ground of botanical differences and geographical botany. "It was brought from Persia to Italy by the Romans in the time of the Emperor Claudius."

The history of the peach really begins with the importation of this fruit into Italy, where a considerable quantity of it was grown at the beginning of the Christian era. It was cultivated in Britain in 1550, and was brought to the United States about 1760.

Peach trees were found growing wild in Arkansas by Nuttall in 1812. The first effort to start a good-sized peach orchard in the United States that I find any account of, was made by Mr. Bayley, of Accomac county, Va. He planted 6,300 trees in an orchard. The next commercial orchard was planted in Delaware in 1832 by Isaac Reeves and Jacob Ridgway, near Delaware City. Earlier varieties of the Alexander type were introduced in the seventies, and they encouraged the peach industry greatly. In a few sections of Michigan and Delaware the peach industry developed rapidly until the dreaded "peach

yellows" was first recognized in 1867. In 1880 many pioneers in peach culture at St. Joseph and Benton Harbor had their orchards laid waste by "yellows," and they gave up in despair. Large orchards were destroyed in Delaware by yellows in 1890.

Many of the large experiments with peaches were made in the Northern States with what we call the "Persian Race" of peaches. In the meanwhile a most important evolution was taking place in the South, about which little was being said. The "Persian Race," the meaning of which I will explain later on, proved to be very unreliable in the South. In fact, in some States, it scarcely bore at all. Peach stones were imported from other countries with the hope of getting something better. From these importations new races have sprung into existence that are now revolutionizing peach growing in the Northern as well as in the Southern States. Enterprising nurserymen and individual growers were trying to find varieties better suited to the Southern tier of States. Numerous seedling trees were grown from trees that fruited at home and also from seed obtained from China, Australia, England, France and Spain. Here and there the best trees that fruited from the seedlings were saved. In some instances the foreign trees were grown near the native trees and nature crossed them. Seedlings from these crosses were fruited and varieties were produced that surpassed everything in the peach line known in the world's history of the peach before. They are still being produced every year. It is too early to write a full history of the peach along this line, since we are in the midst of a great evolutionary period. Peach orchards on a gigantic scale are being set. It took over a century to learn that the peach from Persia was not well suited to the Central and Southern States. A peach orchard of 9,000 acres is being set in Texas, and when completed, will be the largest peach orchard ever known in the world. The races of peaches that make such large orchards possible as a financial enterprise at this time should be understood with clearness.

We divide the cultivated varieties of peaches into five distinct races. (The botanical characteristics of these five races are described in detail by the author in Bulletin No. 36, Texas Experiment Station.)

The differences in these five races have been brought about by the varieties having been grown so long in widely different climates.

The Persian race originated in the high altitudes of Persia. Hence, many of these varieties are not at all suited to climates where the temperature seldom goes

down as low as 25 degrees F. Some of the varieties are tender in bud. Such varieties as Alexander, Old Mixon, Stump and Crawford belong to this race. For nearly two centuries varieties belonging to this race were the only ones planted in the United States. Therefore the many failures made (especially in the Southern States) can be readily accounted for. It is probable that we may find varieties from another race less susceptible to attacks of yellows and rosette than varieties belonging to this race. If so, the many waste places in the North where orchards now have been laid low by these dreaded diseases may be made to bloom crimson and pink again with the peach each recurring spring. This is a line of experimental work certainly worth trial in such localities.

The North China race is by far the most important one known to the peach world. The Chinese Cling (Shanghai), which is the mother of the race, was brought over from China by Chas. Downing, through Mr. Winchester, the British Consul at Shanghai. Mr. Henry Lyon, of Columbia, S. C., to whom Mr. Downing sent a potted tree, was the first to fruit it in 1850.

A second importation was made by Dr. William A. W. Spottswood, of the United States Navy, in 1860, and the peach stones were presented to Judge Campbell, of Pensacola, Fla. From this importation originated Lee, Stonewall and Spottswood varieties. Afterward, Mr. P. J. Berkmans and his father obtained a full set of the varieties from Mr. Campbell and began to experiment with this race. They originated and introduced many valuable varieties. There are other noted varieties that came from this race, such as Carman, Mamie Ross, Family Favorite, etc., but the most noted of them all is the Elberta. It heads the list of all American varieties of peaches, and has proved to be a most wonderful stimulus to orchard planting in the United States. It originated from Chinese Cling seed planted in 1870 by Samuel H. Rumph, Marshallville, Ga., and was named after Mrs. Clara Elberta Rumph. While this race comes much further south than the Persian race, still the amount of Persian blood in the Elberta carries it well up into the Northern peach belt.

The Spanish race was developed in the Southern States from seed brought over from Spain. So far I have been unable to find definite statements in regard to the history of this race. It is commonly called "native peach," in many of the Southern States. Such varieties as Cabler, Columbia, Galveston, Texas and Victoria belong to this race. Some of the red streaked varieties were grown by the Indians, and hence, in some Southern localities, such

varieties are called "Indian peaches." These varieties bear heavily, and come further South than those of the North China race. The name "Spanish Race" was given because this group came from Spain to the United States.

The South China race has been developed from the honey peach. From all I can learn, the honey peach was imported from China by Chas. Downing at the same time the Chinese Cling variety was, in 1850. The original potted tree never fruited with him, but when a budded tree from it was sent further South and placed in the care of the late Henry Lyon, Columbia, S. C., it bore fruit. Later, the variety was placed in the hands of P. J. Berkmans, Augusta, Ga., and the only stock was held by him until 1858, when it was sent out the first time. The variety did not fruit well at Augusta, Ga., but when sent further south into Florida and Texas it bore well. The Climax, Coleman, Early China and Pallas are varieties that have come from this race. They fruit well in the extreme Southern States. Honey is supposed to have developed in Southern China, hence the name of the race.

The Peen-to race grows best in the northern part of the citrus belt. The original Peen-to variety was imported from Australia by P. J. Berckmans in 1869, but it came originally from China, where it is still well known. Angel and Waldo varieties are the most noted varieties belonging to this race. This race is supposed to have originated in a very warm climate of China, and it comes further south in the United States than any other peach. Consequently, bearing peach orchards are now growing further south, where it was impossible to produce the peach with other varieties before.

We have our bearings now. Lasting foundations for successful peach culture in the United States have at last been laid. We can now cross varieties and plant varieties intelligently for certain latitudes. The great commercial peach orchards that are now being planted in the United States have been made possible by such men as Chas. Downing, Henry Lyons, P. J. Berckmans and Samuel H. Rumph. These men have done work that blesses humanity with each recurring peach harvest. Northern peach growers are taking new courage and are planting peach orchards south as a result of development of sure bearing varieties. Golden harvests await intelligent peach planting in Virginia. Let us not forget such important early efforts that laid the foundations upon which we are building.

R. H. PRICE.

Montgomery Co., Va.

Live Stock and Dairy.

STOCK FARMING IN THE SOUTH.

Editor Southern Planter:

I am much interested in the article in your July number on the "*Dual Purpose Short Horn*," followed by the comments made by Prof. Massey in your August number.

Just a year ago I devoted the time usually spent on my annual vacation in Europe, to visiting many of the leading herds of cattle in England; those alike of tenant farmer and of landed proprietor. As there seems to be some misapprehension as to the meaning of the word "Tenant Farmer," just one word by way of explanation. It does not necessarily signify what the term to some might convey; a small farmer of limited means, but simply conveys the idea of one who for some reason or other rents the land which he occupies. For instance, Mr. Taylor, of Cranford, Middlesex county, to whom you refer in your article, is a gentleman farmer, who regularly hunts with Lord Fitzharding's hounds, and owns a very large herd of pure bred Short Horns, with which he supplies milk to the nearby market of London. He rents, like many another, because it is impossible in many instances in England, either on account of the disinclination of owners themselves or through family trusts, to break the tenure of the land immediately adjacent to great cities.

At the time of my trip, I proposed—a plan which has since materialized—to own a farm in Virginia. I sought on my travels to find just such an animal as you describe in your article, what I may call a "Farmer's Joy"—a grand milker during life and a fat carcass at death.

In search of information and through the kindness of friends, I visited many herds, including that of His Majesty at Windsor, where Short Horns and Herefords for beef purposes flourish, Lord Rothschild's herd at Tring Park, where the milch cow reigns supreme; and also the herd of Mr. Taylor, of Cranford, whose sale some months later of milking Short Horns you refer to.

Other herds of beef and milking strains, but less noted, were inspected by me, but as two of these are certainly conducted for profit—Lord Rothschild's and Mr. Taylor's—and as they represent the class, respectively of land owner and tenant farmer, I need not enumerate further as to my opportunities for observation. The one fact that stood out prominently as the idea dominant with the individual breeder was that all of the great establishments specialized, and that those developing beef cattle strove for that object

alone, in many instances using other cows to make up for the paucity of milk of the fleshy parent, and on the other hand, the milch herds rearing their calves on skimmed milk for milking purposes; and that in the sporadic cases, where beef and milk were attempted to be combined, better results would have been attained had one object alone been essayed.

In reply to comments made along this line of rather an inquiring character, so great an expert, both of Short Horn and of Jersey cattle as Mr. John Thornton, of London, whose portrait is about to be presented to him by the Short Horn Society for services rendered the breed, sagely remarked, that one so interested must from an economic standpoint choose the field for his proposed operations and then follow, either into the production of milk or beef. That as the capacity for the production of milk is increased, the power to make marketable flesh is diminished, and vice versa; and so far as I could ascertain, this opinion voices that of the best and most accomplished cattlemen of England.

So much for the "dual purpose" animal. I shall not discuss the merits of the Short Horn in the dairy. All pure breeds have good points. It may be noted, however, in connection with this dual purpose subject that the milking Short Horn scarcely seems to furnish what may be called the "Farmer's cow," as we would understand the term; for it is not usually a good rustler, under adverse circumstances, nor does it seem to be improved from a constitutional standpoint by development along dairy lines. Of course, as a beef producer, the Short Horn is unexcelled.

What, to my mind, is really in the contemplation of English breeders is this question: *After all has been said and done, has not too much attention been paid to the production of a beef type, when a distinctly milking strain would at the same cost have produced threefold the profit?*

For some years Lord Rothschild has evidently been of the latter opinion, and with the aid of his very able assistant, Mr. Richardson Carr, he has done much to lead the advanced thought of that country, to a breaking away from what had almost become a religion—the breeding of Short Horns as distinctly fat cattle. His beautiful home at Tring Park, alike the Mecca for financier and lover of nature, has been devoted to the upbuilding of two great dairy herds to a successful financial basis, and the yearly milking competitions at the show which he has fostered has done knightly service in the determination of this question.

The relative value of beef and dairy products to

the farmer is well set forth in a recent number of the "Live Stock Journal," of London (the leading British breeder's journal), by a distinguished writer, when he says: "A gallon of milk is worth as much as a pound of beef in summer, and a pound and one-half in winter. Three gallons of milk would be produced at the same cost as one pound of beef, so far as actual cost of food is concerned. That the only department of farming that could in England be said to have paid in the past twenty-five years was dairying, there being but one condition of success—the possession of a good class of dairy cows."

The lesson, then, that it seems to the writer of this communication which should be brought home to our farmers is, that they should look deeper into the question whether they cannot more profitably, through the introduction of co-operative creameries, or other means, handle the strictly dairy animal, rather than devote their energies to the fattening of cattle, the market price for which is no longer subject to logical calculation, but rather the creature of monopolistic dictation.

Should one look with favor upon these ideas, he would but be following in the footsteps of the thrifty and prosperous farmers of the Eastern and Middle States, whose sale of milk, production of cream, manufacture of butter and cheese, with the natural incidents to dairying, the fattening of hogs, and the rearing of poultry, have added many millions to the wealth of those sections.

One word further: It seems to me that there is a failure to appreciate to the fullest extent two cardinal principles of success: First, that where it is possible, one should breed only the best pure bred animals obtainable; and secondly, that there must be some means found, such as State and local agricultural shows, to form the basis in Virginia of fair comparison and honest rivalry between a like breed and breeders.

As to the first, it is passing strange that a people who have been the conservators of the thoroughbred horse for many generations should be forgetful of the fact that the same idea of breeding, which, when applied to the horse, means the safe negotiation of the stiffest of hunting countries, when applied to the lower domestic animals, means the acute and accurate development along the productive lines desired. Lowly and homely as such virtues of breeding may seem to be, they are, after all, great factors in the accumulation and development of a nation's wealth.

The best illustration that I have had of the value to the farmer—not as a rich man's fancy, but as a poor man's business, of the pure bred was had upon a

recent trip taken by me in the company of a well-known cattle fancier, to Massachusetts.

We journeyed to a spot high among the bleakest of the New England mountains to inspect a pure bred herd, owned by a small farmer, who, twenty-five years ago, had travelled in his overalls to Pennsylvania, and later to the Massachusetts coast, and had secured a few registered cows. He had no bull, and was compelled to drive his cows twenty-five miles to be bred. He had tended his little herd and peddled his butter in the market, a trip of fourteen miles; he made as his herd increased repeated sales, and had lived to see the day when, without either the proximity of a great market, such as that of Mr. Taylor at Cranford, England, nor a beautiful catalogue of sale setting forth in enticing form the long line of ancestry of Middlesex cattle, men of purpose travelled days to visit his Guernseys, and eagerly bought such of his herd as he would part with at about the same average price per head as those obtained for the Short Horns in England—the sale that has been made the subject of a leading article in your valued journal, and also in the "Breeder's Gazette."

Had this man's cattle been grades, they would have been possibly worth thirty-five dollars per head at his remote place. Such, then, has been the reward to persevering effort to establish a pedigreed herd by a small farmer.

As to the value of agricultural shows, although they may have been tried, and may have been abandoned, they are necessary to development, and are always to be found in communities where marked success is attendant upon effort along agricultural lines. They should by all means be encouraged in Virginia in particular, and in the South in general.

The people of this community are, to my mind, among the most advanced in their ideas and methods of agriculture in the South; and this section of the State, with Washington and Baltimore so near at hand, is peculiarly adapted to the development of a great dairy industry; so with a general introduction of pure breeds of dairy cattle, and of swine, I shall hopefully await the time when energy directed along the lines of least resistance shall make blossom the fruitful fields of beautiful Loudoun.

WESTMORELAND DAVIS.

Morven Park, Leesburg, Va.

MILK FEVER.

(Continued from last month.)

The accompanying cut shows the appliance now in use at the Veterinary Department of the Virginia Polytechnic Institute Experiment Station for admin-

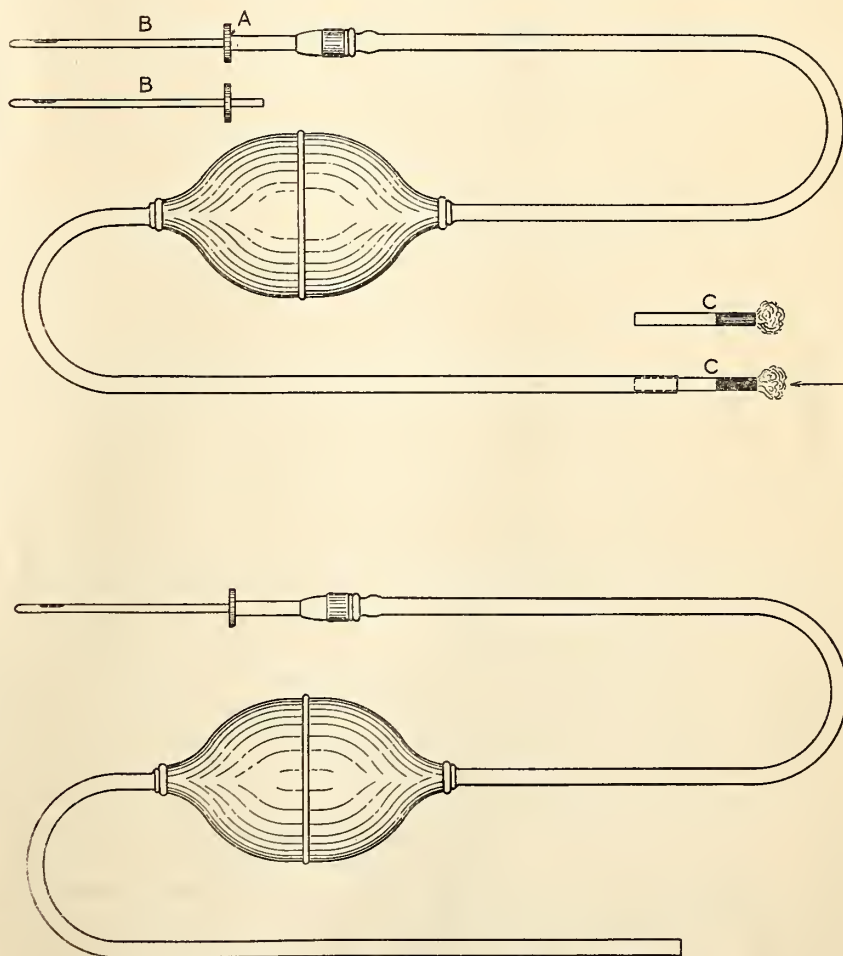
istering this treatment, and in the writer's opinion it has the most advantages, with fewer drawbacks than any yet devised, either there or elsewhere, and is one which can be as safely employed by the layman as the most experienced veterinarian, provided instructions are closely observed and followed. The accompanying cut represents an ordinary bulb syringe of the best quality, the tubing of which is sufficiently large to admit of an ordinary Faber lead pencil. This size is preferable to the small tubes. Inserted into the hard rubber pipe at A is a medium-sized milking tube, which is pushed home sufficiently far to be air-tight at the point of union. (See cut.)

Figure B represents an ordinary milking tube, this style being preferable. No objection can be raised to the ringed style, the rings being easily removed to admit of deeper insertion into the hard rubber pipe.

Figure C represents a piece of quarter-inch glass tubing from $1\frac{1}{2}$ to 2 inches long, which is inserted into the rubber pipe, the darkened end representing a plug of sterilized absorbent cotton inserted, through which the air must pass, and which effectually robs it of all contamination. No objection, however, can be raised to inserting the cotton into the end of the soft rubber pipe, in case the proper tubing cannot be obtained.

Technique of the Operation.—When the patient is discovered in a comatose or semi-comatose condition, and is unable to rise or even control her action, but remains in whatever position she may be placed, no time must be lost in placing her in as natural a position as possible—viz., propped up on her breast bone with her head drawn round on her side (see cut). She can best be kept in this position by sacks filled with straw or hay, sufficient of which should be provided to prevent injury to her head and horns, if semi-comatose, for in this condition she frequently throws her head violently around in her delirious efforts. Attention must now be directed to her udder, with as little delay as possible. See that her position is not injurious to that organ, which must be raised off the ground and clean cloths placed under it. All milk must now be removed and the teats

thoroughly washed with a 2 per cent. creoline or carbolic acid solution. Where it appears desirous to employ the Schmidt treatment in conjunction with the filtered air (as it is in all violent cases which occur in 24 hours or less after calving), two drachms of potassium iodide is dissolved in one quart of warm water (blood heat) that has been previously boiled, one-fourth of which is to be pumped into each quarter of the udder through the instrument previously described, and which has been rendered absolutely clean by immersing and pumping through it the creoline or carbolic solution, as the case may be. The udder is next inflated with air, which is done as



INSTRUMENT BEST SUITED FOR ADMINISTERING TREATMENT.

Lower figure represents syringe for giving the Potassium Iodide solution.
Upper figure represents syringe equipped with air filtering attachment.
 A, point of union between hard rubber pipe of syringe and milking tube.
 C, piece of $\frac{1}{4}$ inch glass tubing, $1\frac{1}{2}$ to 2 inches long, with sterilized absorbent cotton inserted at entrance, through which the air must pass, and which robs it of infection.

follows: The syringe should be worked until the operator is satisfied that all moisture as far as possible has been removed. This can be done in from one to three minutes. At the entrance of the syringe a

small piece of glass tubing packed with sterilized absorbent cotton is inserted (see cut) tight enough so that all air passing is effectually filtered and yet not so tight as to impede its free passage. The tube B (disinfected and washed in boiled water) is again introduced into the teat and the quarter inflated to its fullest capacity, and so on until all have again been treated, the tube being disinfected and rinsed in boiled water after each teat has been treated. Kneading and rubbing the udder thoroughly assists the air and potassium solution in more rapid absorption by spreading it over a greater mucus surface. The cow must be kept in position and should have constant attendance until consciousness returns, which usually occurs in from two to twelve hours, and sometimes even less. After she rises very little further treatment is required beyond restricting the diet and milking at regular intervals to restore the function of the udder. Where recovery is delayed and indications of return to consciousness are wanting, the Schmidt injection should be repeated in about eight hours, air being introduced as soon and often as the udder is sufficiently slack to receive it. The increasing amount of milk in the udder may be regarded as a most favorable sign. After apparent recovery, it sometimes happens that the bowels are obstinately constipated from impaired peristaltic action of their muscular coats, due to deficient nerve force. This is to be relieved by a moderate dose of epsom salts, 1 to 1½ pounds, to which should be added one-half ounce of ginger and one drachm powdered nux vomica, the latter drug to be repeated in the same dose every eight hours for several days, and only the most easily digested and laxative diet allowed in restricted quantities, together with a liberal supply of pure spring water. *In no case is drenching admissible during the period of coma.* Successful and non-successful treatment usually hinges here, and drenches given at this time often prove fatal, or produce serious complications, which might have been avoided, and at best can be productive of little or no good, as the intestinal absorbents are in a state of extreme inactivity, and if the drenches actually escape doing injury to the patient, are not absorbed until recovery takes place and play no part whatever in bringing about that result. Some practitioners contend that the potassium iodide is superfluous when air or oxygen is freely employed, and while this is undoubtedly the case with many patients, in the writer's opinion the drug often hastens what would otherwise be a delayed recovery, the action of the drug being to stimulate the absorbent system and cause the more rapid expulsion of the poison from the system. If an opinion were ventured as to which should and which should not receive the potassium iodide solution, we would say that all cases occurring in less than twenty-four hours

after calving, or those upon which treatment had been delayed several hours from the commencement of the attack, should receive it, although mild cases yield readily to the air alone.

The following records of cases give a fair idea of the effectiveness of the treatment, and what may be looked for in similar cases:

Case No. 1.—Jersey cow, 6 years old; dropped calf on Tuesday afternoon; appeared normal until Wednesday at 4 P. M., when she developed unmistakable evidence of an attack of parturient paresis. Some delay was occasioned in getting a supply of boiled water, it being 5:30, when injection was given. By this time she was rapidly sinking into unconsciousness. The symptoms were checked in less than half an hour, and held so, and at 2 A. M. she rose to her feet, and made an uninterrupted recovery, returning to her full milking capacity on the third day—no udder complications whatever.

Case No. 2.—Shorthorn Jersey grade, five years; calved at 6 A. M., normal; at 6 P. M. was somewhat restless, and did not yield her usual flow of milk. Nothing was thought of this by the owner until next morning, when she was down and unable to rise and semi-conscious. Treatment was applied at 8:30. To the utter surprise of every one present she was on her feet and feeding at 11:30, or three hours after the first treatment; returned to her full flow of milk on second day, and made an uninterrupted recovery.

Case No. 3.—Grade, six years old; dropped calf Thursday afternoon. On Friday afternoon presented symptoms of illness, and at 4 P. M. went down, and was unable to rise; was made as comfortable as circumstances would permit, but was left alone for the night without further treatment than a dose of salts. Next morning was found by the owner perfectly helpless and apparently dead, except for her mechanical breathing. The writer was sent for, and reached the patient at 11:30 A. M., or upwards of twenty hours from time of collapse. Treatment was given with as little delay as possible, and results closely watched. In two hours the pulse, which had been previously imperceptible, was showing some strength, and at 4 o'clock she was able to hold her head up and returned to consciousness. Heart and nerve stimulants were given at regular intervals, and next morning she rose and walked out into the adjoining lot and ate a little grass. That evening, however, she relapsed into unconsciousness and died before morning without further treatment. Had this case been treated early in the attack, or had the case been at the hospital and the udder treatment renewed on Sunday morning and evening, in the writer's opinion a good recovery could have been obtained.

Case No. 4.—Guernsey cow, 7 years old and very fat; calved Tuesday during the day. On Wednesday at 3:30 was found down and unconscious. The

writer reached the case and had treatment applied at 4:15, and although she was perfectly unconscious at that hour, at 5:30, or in one hour and fifteen minutes after treatment, she held her head up and fought flies and caressed her calf; rose to her feet at 10 P. M., and was chewing her cud the next morning when visited. This case returned to her milk promptly, and in less than a week was one of the heaviest producers in a herd of nearly a hundred.

In the last case a very slight swelling recurred in the right fore-quarter of her udder, due probably to injury through lying on it, but which disappeared after a few applications of comphorated liniment.

Other cases might be cited had their records been kept, but the above indicates very clearly what may be expected under similar circumstances.

Summary.—Be sure your case is one of parturient pæsis. Place her in the position indicated (see cut), propped up on her breast bone. Milk out the udder clean, and protect it from the ground with clean cloths. Disinfect the teats, hands and syringe. Dissolve two drachms potassium iodide in one quart warm water (blood heat) that has been previously boiled, one-fourth of which is now to be injected into one quarter. The tube being withdrawn from the teat is now again dipped into the creoline or carbolic solution and rinsed off with boiled water, is inserted into the second, third and fourth teats under the same antiseptic precautions as the first. The syringe is now allowed a few minutes to dry, which can be hastened by pumping air through it. The inlet to the syringe now packed with a plug of sterilized absorbent cotton and again pumped through it a few times, everything is now ready for the second portion of the operation—viz., the introduction of air into the udder. Again the tube, disinfected and washed, is introduced into the first teat, an assistant manipulates the rubber ball until the quarter is fully inflated. The tube being withdrawn, the teat is now secured by clean tape to prevent the escape of air. All teats are treated in exactly the same way with the same disinfecting and rinsing of the tube between injections. Keep the cow in as comfortable and protected a position as possible. If in two hours she has not risen to her feet or is showing symptoms of returning consciousness, and the udder is less tense, more air is to be introduced under precisely the same antiseptic precautions. If, after eight hours she still remains comatose, the potassium iodide injection should be repeated. If after she has risen to her feet her bowels remain inactive a dose of salts combined with ginger and nux vomica may be given with good results. The diet should be restricted for a few days, usually three, and a complete recovery may be looked for. Careful watching for the first twenty-four hours after she rises is advisable that any relapse may be noticed early and the treatment renewed

without delay. Make your antiseptic precautions a strong feature of the whole procedure, remembering that infection introduced into the udder will not necessarily impede the action of the treatment so far as parturient paresis is concerned, but will be followed by disastrous consequences (infective inflammation) after apparent recovery. *And in no case attempt drenching during the comatose or semi-comatose period.*

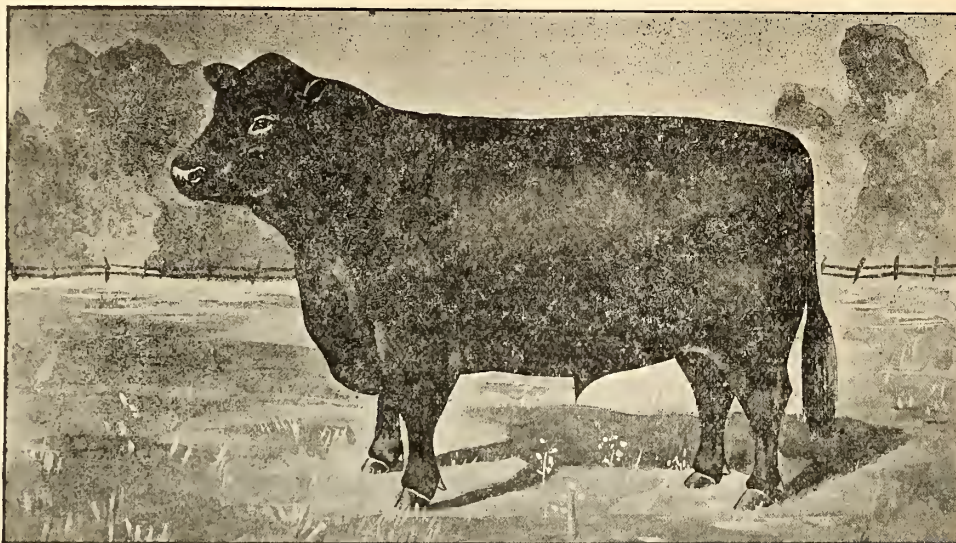
Prevention of the Disease.—Since it is known from observation that only the best milkers when in high condition are subjects of this disease, much can be done in the way of preventing its appearance or at least modifying its severity. The first condition—viz: great lacteal development being the highest aim of the practical dairyman, it would be impractical to in any way check that quality beyond for a short period, as without it, it were foolish to attempt to direct a successful dairy business. This is impossible with any but the highest producers. This being so the dairyman's attention should be directed towards the cow's condition just previous to and at the parturient season. A cow in high condition and heavy milker should be compelled to take regular daily exercise previous to calving, and her food should be curtailed and of a laxative character. It is also a safe practice to give a purgative of epsom salts, one to one and one-half pounds, a few days previous to calving, and again a smaller or similar dose a few hours following that act, and the amount of rich food should be restricted for a few days until the dangerous period has passed. English writers upon the subject contend that cows which have been milked clean immediately and for three days after calving are more subject to milk fever and claim to have lessened to a very great extent the number of cases by only partially milking out the udder for several days after calving. The writer cannot account for such results, but they appear to be proven. Granting such to be the case, there is hope that more light may yet be looked for as to the true character of the disease, and following along that line with judgment can do no harm.

Appliances for giving proper treatment can be obtained from the surgical instrument dealers or can be made by obtaining a milking tube as per cut and a bulb syringe of the best quality having large size tubing, and a supply of absorbent cotton and creoline. Milking tubes may be obtained through any good drug store, or from surgical instrument dealers, such as Haussmann & Dunn or Sharp & Smith, Chicago, Ill.

JOHN SPENCER,

Virginia Polytechnic Institute, Blacksburg, Va.

In writing to advertisers, mention PLANTER.



PRINCE BARBARA, 68904, SIRE PRINCE ITO, DAM BARBARA OF WOODLAWN.

This great son of the Highland Champion \$9,100 bull Prince Ito is one of the prizes Meyer & Son, whose advertisement will be found in this issue, selected from the famous Woodlawn herd. This son of the great champion is to head the herd for a few years. Prince Barbara is a half brother to the show steer Kid Eclipsor, who has won many prizes in the show rings and is from as fine a cow as can be found in the breed. Barbara of Woodlawn, his mother, has never produced a calf which sold for less than \$500.

ANGORA GOATS IN VIRGINIA.

Editor Southern Planter:

The Angora kid crop was very fine this year. Although we still have some very young kids, yet I think there will be no trouble raising 100 per cent. kid increase. The Angora goat business is still booming, and on the increase every day. A letter from New Mexico, where I was last year, says: "I have no Angora does for sale at all. Already 7,000 kid does booked for shipment, but cannot get hold of them for love or money. Am selling and have sold buck kids for \$50 each right along, and have almost run out. Can't pick up a earload of does in this country." The above is from one of the largest breeders in the Southwest.

I lost thirteen kids last February in the big snow. I was in Richmond, and had no one to look after them, and they were frozen to death as soon as they came. Still expect to raise 100 per cent. increase. Mohair has been low this year, but is climbing a bit

now. John Fulton, of the Angora Association, says he has made some very good sales in Boston. We in Virginia have the greatest opportunity to turn our worthless and grown up lands to account that we ever had by raising goats and reaping the rich harvest of the silver fleeces after they reap the harvest of leaves, brush and weeds. "Angora goats" is the solution of the labor question, as they clean up the filth and weeds and return us rich, well fertilized land covered with a magnificent stand of blue grass. They require very little attention except in kidding season, and return us handsome profits. Cheap sheds and a three and one-half foot fence will solve the housing and pasturage question, and plenty of brush and a regular salting the feed question.

MANN S. VALENTINE.

Goochland Co., Va.

SHEEP HUSBANDRY IN ENGLAND.

Editor Southern Planter:

In a late issue a correspondent says he fails to understand why the English farmer succeeds with a large flock of sheep. As I was in the 40's at an Agricultural College and sheep farm for two years, and later two years more on a Wiltshire Down sheep farm, I can perhaps tell him why. The rotation in both cases was the four course system, Swedes (rutabagas), barley, grass, wheat. The Swedes were drilled with half a ton of ground bone per acre. When ready, the sheep were folded on them, being placed each day on such an area enclosed with hurdles as they could eat in the 24 hours, and the crop was thus disposed of during the winter, then barley sown in the spring followed with Italian rye grass, or rye grass and

clover, seeded with the barley. The first cutting of the grass was made into hay, and the aftermath eaten off by the sheep, then followed wheat, and between the wheat and the turnips a catch crop of crimson clover was sown, which was eaten down by the sheep. Thus two crops were sold direct, and three as mutton and wool. Under this system the land was holding its fertility, although not a deep soil, and underlaid by clean chalk. As well as I can remember, the average crop of barley was forty bushels per acre, and wheat twenty-eight. The lambs (Hampshire Down) were dropped in February and sold in August. The last lot I saw sold fetched 27 shillings (about \$6.75) each, 200 of them. This was on the Wiltshire farm, which consisted of 700 acres, 200 in irrigated meadow and permanent pasture and 500 in arable. The rent for the whole was £1 (\$5) per acre. The rule is, a sheep to an acre for the arable land. I hope I have thrown some little light on the subject.

Charles City Co., Va.

W. R. ATKINSON.

HEREFORD BREEDERS' ASSOCIATION.

The success following the organization of the breeders of Hereford cattle in other States has suggested the desirability of the Hereford breeders in the State of Virginia organizing themselves into an association for the purpose of forwarding the interests of that great beef breed by conducting joint sales at desirable places in the State, and by circulating literature and making generally known the great value of the Hereford sire as a producer of the finest beef in the world.

It has been proposed by several breeders that a general meeting of all the Hereford breeders in the State and those interested in Herefords, be held during Roanoke Fair, the last week in September, and it is earnestly desired that all who are interested in the furtherance of Hereford interests should lend their aid. Those expecting to be present will kindly send their names and address to Edward G. Butler, Berryville, Va., so they may be notified as to the evening appointed for the meeting.

BIG PRICES FOR YORKSHIRE HOGS.

Editor Southern Planter:

At a sale recently held at Hamilton, Ontario, 74 head of large Yorkshires were sold at an average of \$85.60. Several sows in farrow sold at from \$350 to \$370 each. The rapidity with which large Yorkshires have forced their way to the front as a profit-

able bacon hog, has been nothing less than marvellous. Since the introduction of this breed into bacon producing districts of Canada the hog business of that country has been revolutionized, and in ten years the value of bacon and hams exported from the Dominion has increased from a little over a half million to more than \$14,000,000.

Throughout Canada and at a number of the Experiment Stations in the United States the large Yorkshire has shown by actual test, both in the feeding pen and upon the butcher's block, to be superior to any other breed. The lard hog has seen its day, and everywhere there is a cry for the bacon hog. The large Yorkshire meets the requirements of the packer. They have been bred to meet these requirements and have not been long enough in the United States to be ruined by the methods of feeding that are in vogue here, and which have wellnigh ruined nearly every breed of hogs in use in this country.

That there is a demand on the part of the packers for a hog with the characteristics of the large Yorkshires, is shown by the fact that the large packing concern of Swift & Co., of Chicago, have arranged with the Illinois State Board of Agriculture for a special swine class at the coming Illinois State Fair, the entries to be judged strictly from a packer's standpoint.

The large Yorkshire supplies a carcass with a large proportion of lean meat, and they will grow rapidly, and can be ripened for market at any age, thus regulating the size of the carcass. The sows are immensely prolific, great milkers and excellent mothers. To be able to raise the best bacon, our farmers must use a bacon breed.

A. M. BOWMAN.

Roanoke Co., Va.

TO TELL THE AGES OF PIGS.

Pigs having their corner permanent incisors cut will be considered as exceeding six months.

Pigs having their permanent tusks more than half up will be considered as exceeding nine months.

Pigs having their central permanent incisors up and any of the first three permanent molars cut will be considered as exceeding 12 months.

Pigs having their lateral temporary incisors shed and the permanent appearing will be considered as exceeding 15 months.

Pigs having their lateral permanent incisors fully up will be considered as exceeding 18 months.

When writing to advertisers mention Planter.

The Poultry Yard.

MORE ABOUT GAPES.

THE HALSTED THEORY AND TREATMENT.

As early as 1865, Mr. A. M. Halsted, of Rye, N. Y., began to experiment as to how to get rid of the dire scourge of gapes, that was destroying so much of the poultry through the Eastern States. In 1880-1881, there was all over the world a fearful infliction of gapes. Records tell more of this in England than here. At that time, what is known as the Halsted theory, was used in both New York State and in England, with good results.

Since that time there has been little attention paid to this. When Mr. Halsted took up this matter there was little scientific or journalistic aid extended to the poultryman. He was compelled to work out his theories and ideas, and he began working to prevent the coming of the gapes, rather than the curing of them. Mr. Halsted discovered that there was a large louse, or as he calls it, tick, found on the head and about the throat of many of the young chicks when hatched. In 1865 he took a brood of fifteen so troubled and picked off with his fingers all of these head lice or ticks, and continued to examine this brood every day or two, until they were six weeks old. Not one of this brood was troubled with the gapes the entire summer, while many from other broods, kept in the same lawn and runways, died of the disease that season.

This led Mr. Halsted to believe that the gapes were brought by the presence of these ticks or head lice. He made a more thorough test the following year, but to aid in this test, he made several kinds of ointment, with which he anointed the head and throat of the young chicks when hatched. This was so satisfactory to him that the following year he took thirty chicks and thoroughly anointed the heads and throats of one-half of them, allowing the other half to go without treatment. The result was that not one of this brood that had been so anointed had the gapes, while all but one of the balance of the same brood died of the disease.

The following year he carried this out more extensively, and had a number of neighbors near him use the same treatment. The general result was very satisfactory, except where the ointment was carelessly or too profusely used with the result that a number of the chicks were killed by mercurial poisoning.

A poultryman of thirty years' experience now living near New York, stated to the writer early in June that he had been using the Halsted remedy for over twenty-five years, and that he had never had a single case of gapes since he began using it. Each season it is carefully used, and he stated that he should con-

tinue to use it as long as he was in the poultry business, or until something satisfied him that it was not a certain preventive.

Mr. Halsted's theory was, that since poultry never showed any inclination to perspiration, the lice or ticks upon their bodies were compelled to come to the nostril or the mouth of the young chicks for moisture or drink; and that they laid their eggs in the nostrils, where they would hatch, and the worm would find its way through the connecting passage of the nostril to the wind-pipe, where they grew and caused the trouble. To prevent the possibility of this, he compounded the following ointment: mercurial ointment, 1 ounce; pure lard, 2 ounces; flour of sulphur, $\frac{1}{2}$ ounce; crude petroleum, $\frac{1}{2}$ ounce.

This should be applied to the head of the chick while it is in a semi-liquid state, and may also be applied to the throat as well, when ticks are present. This must be sparingly applied, or the chicks may be poisoned with the mercury. It will cost very little for those who have chicks which are troubled with gapes, to make use of this remedy, but it should be borne in mind that the ointment must be applied to the head and to the throat, if needed, when they are 24 hours old; that it must be very carefully used, so as to not cause mercurial poisoning. Use enough to kill all the ticks, but not enough to smear and grease the head and throat unnecessarily.

There is another manner of curing gapes in this country, and that is to place the ailing chicks in a box and stretch a cheese-cloth over them, and dust some lime down upon the heads of the young chicks. There is a better preparation than this made in England, though we shall change it a little, as they are using arsenic, and we cannot advise the use of it knowing it has made trouble; powdered quicklime, one pound; powdered sulphur, one-half pound; tinct. asafoetida, one ounce; oil of thyme, one ounce. Thoroughly mix together and to keep it dry and in good condition, put into a glass-stoppered bottle. When needed, dust on the chicks. Or a better way, is to put a tablespoonful or two into a saucer, and with a rubber pipe and your mouth or a pair of bellows blow a quick current of air into the saucer, so as to fill the air of the box or coop thoroughly full of this powder. It is stated that this will get into the nostrils and wind pipe of the ailing chicks and destroy the gape worm.—*The Feather*.

You could not do us a greater kindness, in writing to advertisers, than to say you saw their ad. in THE PLANTER.

The Horse.

NOTES.

The oldest agricultural journal in the country, and probably the most popular and widely read is the SOUTHERN PLANTER, and truly, too, its circulation seems to reach the uttermost ends of the earth, as evidenced in part at least by the following letter from our New Zealand friend, Mr. Ivar C. Asplund, who saw my card in the SOUTHERN PLANTER and responded:

Postmarks show that the communication took five weeks to reach this city. Here is an exact copy of the letter:

11 July, 1904.

Canley Park,

W. J. Carter, Esq.
P. O. Box 929,
Richmond,
Virginia.

Rahotu,
Taranaki,
N. Zealand.

U. S. A.

Dear Sir:

I beg the favor of copies of the journals—Kentucky Stock Farm and Breeder and Sportsman—which I believe you represent.

Thanking you in pleasurable anticipation,

Believe me,

Yours truly,

IVAR C. ASPLUND.

✻ ✻ ✻

With covers of scarlet, lettered in black and gold, the print being red and black, and the headings and footnotes in red, which is the makeup of the catalogue and prize list of the fourth annual exhibition of the Richmond Horse Show Association, the publication is by odds the handsomest thing of the kind seen this season. In addition to the dates, October 18th, 19th, 20th, 21st and 22d, the pamphlet is filled with interesting information from cover to cover. The classes listed number fifty-one and prizes are offered for harness horses, hunters, jumpers, park hacks, saddle horses and ponies. The prizes aggregate over \$9,000, and unless stated to the contrary, the money divisions in each class are \$100 for first, \$50 for second, and \$25 for third. While new classes and special features have been introduced already others will be added and on the whole we look forward to the greatest show ever seen in the South. The class for harness horses will, of course, attract much attention, but seeing that Virginia is the great Southern stamping ground for hunters and jumpers, excelling, with the possible exception of Canada, any other portion of America in the production of such horses, a rare treat may be looked for in that direction in the way of the great fields competing on the tan bark. One of the new features likely to interest the masses will be the introduction of hunt club teams

and hounds, while a perusal of the catalogue will disclose others fully in keeping.

✻ ✻ ✻

Lucky Clover, the champion steeplechase horse of 1903, has, according to reports, run his last race, having received an injury in the running of the Beverick steeplechase at Saratoga on the 6th instant, which necessitates his permanent retirement. This is the third noted jumper owned by "Mr. Chamblet," E. C. Hoper, of Boston, that has gone amiss just as that gentleman was planning an English campaign. Lucky Clover is a bay gelding, foaled 1897, by Flatlands, dam Lucky Clover, by Bersan. He was bred at Fort Chiswell Stud Farm, Max Meadows, Va. He was a big winner in some of the most important events of the season.

✻ ✻ ✻

In Red Feather, the Virginia bred mare, four years old, by St. Carolus, dam, a trotting mare, J. C. Poulterer, of Philadelphia, has the prospect for a great jumper; in fact, her performances would indicate that she is likely to reach championship form. The daughter of St. Carolus is 16 hands high, and well formed. An offer of \$2,500 has been declined for this mare. Red Feather's sire, St. Carolus, is owned by Courtland H. Smith, Hampton Farm, Alexandria, Va., where he formerly stood, but for a couple of seasons past the son of imp. St. Blaise has been in the stud at Warrenton, Va.

✻ ✻ ✻

Joseph Lassiter, of the Richmond Horse Bazaar, this city, has sold to L. L. Wallace, Amelia, Va., the chestnut colt Prince Henry, by Patronage, dam Hazel Eye, by Sir Walter, Jr., 2:18 $\frac{1}{4}$, sire of the great race mare Alcidalia, 2:10 $\frac{1}{4}$. This colt, now in his two year old form, stands sixteen hands in height, and with age and development promises to make a grand looking horse. He will be placed in the stud by Mr. Wallace, and should do much toward improving the stock of the section to which he has been taken. Patronage, the sire of this colt, got the famous Alix, 2:03 $\frac{3}{4}$, and is a full brother to the noted sires Patron, 2:14 $\frac{1}{4}$, and Prodigal, 2:16.

✻ ✻ ✻

Apparently not for a decade past has such interest been taken in breeding as during the present one, and those having control of desirable stallions seem to be well pleased with the patronage received. Certainly this applies to Kelly, 2:27, the son of Electioneer and Esther, whose court has been visited already by over seventy matrons. and there are others to follow. A number of the best bred mares in the South have been mated with this brother to the famous Expressive, 3, 2:12 $\frac{1}{2}$, some with fast records and others by prominent sires out of great producing dams.

Miscellaneous.

THE LABOR DIFFICULTY.

Editor Southern Planter:

I have just finished reading the July issue of the *PLANTER*. It, with the *Farm Journal*, *Farm and Home*, and the *Montreal Herald and Star*, which is a weekly journal, furnishes me with all the agricultural pabulum necessary for my calling. My sixty-five years' experience goes for nothing. After reading the article of the Senator of the Eighteenth District, I felt like quoting one of Randolph's philippics on a certain occasion when a representative of Maryland had made a speech in the House. If we were both present at an agricultural Institute I should be most likely to fire it off. Suffice it to say I differ with him on the labor question, and I have had some personal experience. Between the years 1840 and 1850 I lived in New Jersey. Then we could get the Irish and German immigrants right from the ship, superior to any foreigner at the present time, at a low rate of wages. At the same time there were two negro villages of 400 or more inhabitants each near by. We had thus a choice of good help. I worked in the field with these people, and failed to recognize any superiority of the whites over the blacks. In 1850 I bought in Virginia. Then the class of poorer white men had to come in competition with slave labor, to which a certain degradation attached. I hired the slave labor and made it pay; indeed, one of the most productive farms in this section was owned and carried on by a slave owner. Since then there has been an entire revolution in the labor problem, not confined to Virginia or any other section. Now, the question is, have we the brains or inclination to adjust ourselves to the present situation? If not, the Department of Agriculture is powerless to afford any relief. It is not necessary to offer any bonus to the negro to vacate. He does not stand on the order of his going either, and there is where the shoe pinches. He goes at once. We have to contend with that very difficulty. When a "darkie" can go to the brick-yard and get \$1.50 per day for ten hours' work, he ought not to be blamed if he chooses that rather than fourteen hours a day at 75 cents or a dollar. The white man would be a dolt that wouldn't do the same thing. Some of our dairymen got on their metal and were not going to stand any foolishness. One sent to New York and got a crew of Germans, who did tolerably well for two or three months, and then abruptly left just in

harvest time. Another brought in some Poles. He had a picnic. Since the degradation of white labor competing with slaves has been removed we have some most excellent white natives, who are willing to work, but there are not enough to go round; besides, when a white man becomes intelligent enough to manage the present farm machinery he wants to set up for himself. Enough on the labor question. As I have read the several articles from the Norfolk land agent, it surprises me that he should content himself in his present position. One thousand dollars an acre would pay better than any commission business I know of. I don't doubt but that such results are attainable, but if they were the rule there would not long remain any land for sale in that vicinity. I remember some years ago one of my neighbors set out one-fourth of an acre in strawberries. He cleared over \$300 the first year. He put in an acre and did not get so much as he did on his first venture, and several others who caught the mania ran the mowing machine over their beds, as the grass was worth more than the berries. Since then they have had another boom and have again flattened out. One man who has sold \$1,000 worth did not realize \$50 this year. I consider such articles misleading, and as of no practical benefit to our profession. Our Farmer's Club has been regaled with the wonderful results attained by a certain Mr. Dietrich, a Lutheran minister near Philadelphia, who on 13 acres of land kept 18 head of Jersey cows, besides some young stock. No credit was given to a faithful man who did all the work. Another matter that has interested us was the wonderful statements in regard to Mr. Clark's success in raising grass, when it appears by an advertisement in your journal that he is not dependent on that source for his revenue. It reminds me of what our landlord in New Jersey said to my father: "John, I think a good bank account is a good thing to have in farming," which, unfortunately, few of us possess. It is true we are confronted by conditions which must be overcome by theories proven by facts, remembering that scientific theories are one thing, and the theories of scientists another.

In conclusion, there is a phase of our situation that has concerned me considerably, that is, Can a young man and his wife acquire a competency farming at the present day owning a hundred acres without any other capital? I think I could answer both affirmatively and negatively.

E. E. MASON.

Fairfax Co., Va.

NOTES FROM TIDEWATER, VA.

Editor Southern Planter:

The Government weather report for July, 1904, is on our table, and shows as follows: The highest thermometer was on the 6th and 19th, when the mercury reached 94, the warmest weather for the month.

The average temperature for the month was 77 degrees; while the average for the month of July for the past thirty-four years has been 79. The rainfall for the month of July was 6.56 inches, falling on twelve different days—viz., on the 1st, 2d, 6th, 8th, 10th, 12th, 17th, 20th, 22d, 23d, 24th, 25th, pretty well distributed. Greatest amount of rain in any period of twenty-four hours was 1.34, on the 12th.

The average rainfall for the month of July for the past thirty-four years has been 5.83 inches. This rainfall coming as it does in about twelve showers, well and evenly distributed throughout the month, does not permit our meadows or pastures to get bald-headed in midsummer, because August comes right along with about the same record as regards temperature and rainfall.

In fact, July and August give us fully as much rain as any other three consecutive months in the year. At the same time the temperature is quite moderate. The highest thermometer being 94 and the lowest 65; and the rainfall nearly 6 inches on an average for thirty-four years, one can see that July and August are great growing months.

July, notwithstanding that the rain fell on twelve different days, gave us twenty-three pleasant and eight cloudy days. This is accounted for from the fact that the rain falls more frequently between 6 P. M. and midnight than at any other portion of the twenty-four hours.

Everything in the ground is just jumping, weeds, grass and all. Those farmers who laid by their corn the last days in June or the first week in July and sowed the corn fields with cow peas may look with equanimity upon the growing weather as the peas take the ground and keep down the rank growth of weeds and grass, which otherwise is sure to take the corn fields in July and August.

If a person be in doubt as to grass growing in Eastern Virginia, all he need do is to examine the corn fields of this section in August. The nice and equable adjustment of warmth and moisture is such that everything in the ground, with roots to it, makes a very luxuriant growth. It, therefore stands to reason that the farmer should keep his land fully occupied and covered with useful crops for the market or for his stock, rather than to let the weeds and grass

come in, as they surely will do, unless a crop of peas or some similar crop be sown between the corn rows at time of last cultivation of the corn.

The steady movement of labor, however, from the farms of the State to the cities operates against the farmers, and they have suffered thereby. The remedy is more stock, more stock crops and less special crops. The special crops of our State, such as tobacco, peanuts, fruits and vegetables, etc., require a great amount of hand labor while the stock crops may be and can be and should be handled largely by improved machinery and improved methods, thus enabling fewer hands to cover more territory and secure better results. What a time for turnips in July and August. How such growing weather would delight the heart of the Northern, Western or Eastern stock men.

How the thoroughgoing English farmer would appreciate such weather for his root crops. How such weather would tickle the German farmer, who grows the root crops heavily, and who also grows silage crop from seed purchased of one of our Norfolk county truckers, who raises from 30,000 to 50,000 bushels of the finest of silage corn annually—that is to say, raises that much corn, which he ships to Europe, where it is planted for silage purpose.

All over the East, North and West, July and August are hot, dry months, with warm nights—too warm frequently for comfortable sleeping. The pastures give out and the meadows become sere and brown, and there is a great shrinkage of milk unless the farmer has provided for this dry weather by growing a green crop to cut and feed to his milk stock, thus enabling him to tide over the dry spell.

The growth of grass in pasture and meadow here is greater in July and August than in May and June. Our farmers must turn their attention more and more to more and better farm machinery. Improved implements, whereby one man can do the work of three or four, must be used.

What is to become of our State when all the young white men have migrated to the cities, and when all the colored labor has likewise gone into the commercial centres, where they find employment in gangs or squads or bunches, as the colored people like to work in droves, so that they can laugh and joke and shout and sing at their work?

The upshot of the whole matter is this. Our farmers must pay a greater amount of attention from this time forward to choice stock of all kinds, excepting perhaps horses, as we do not believe it will pay to raise horses in Eastern Virginia, but when it

comes to sheep, cattle, hogs and poultry, there is no section in the Union where such stock will pay as well as here.

For every laborer who leaves the farm for the city the farmer should manage to place two or more head of good stock. He should reduce the area of the crops grown or cultivated largely by hand and replace them with crops cultivated by machinery. This will not only improve the farm, but will also improve the farmer's finances.

There is a scarcity of labor in the agricultural districts of the South. There is also a scarcity of stock.

The prosperity of the South demands that our larger farms be subdivided and sold to men who will devote them to stock and stock crops. Our State should take active steps to promote such a movement. An intelligent, practical class of immigration is needed to speedily and rapidly and surely remedy the "condition" of things, for as Grover said: "It is a condition which confronts us and not a theory."

A. JEFFERS.

THE WHEAT SITUATION.

Europe is the largest buyer of American wheat and flour. Its requirements, in addition to the home crop, range from 500 to 550 million bushels annually. This was supplied last year by Russia, India, Argentina, Australia and America, as follows:

Countries.	1903-4—bush.	1902-3—bush.
America	151,128,000	244,823,000
Russia	142,938,000	132,664,000
Danubian	57,432,000	57,776,000
India	55,864,000	24,183,000
Argentina	83,264,000	49,424,000
Australasia	26,832,000
Austria-Hungary	5,278,000	2,704,000
Chili-North Africa	11,276,000	15,924,000
Totals	534,012,000	527,498,000

The European crop of wheat this year is estimated to be 146,000,000 bushels less than last year; the 1903 crop having been 1,796,311,000 bushels, whereas the 1904 crop is estimated to be 1,650,000,000 bushels.

The Russian winter wheat crop is a failure, and their spring wheat crop has had a very unfavorable start. The Austria-Hungary crop is 25 per cent. short; the Italian, 15 per cent., and the Spanish crop, 15 per cent.; the Roumanian crop is 40 per cent. short, and the United Kingdom, which last year raised 48,000,000 bushels, will, this year, raise less than 42,000,000 bushels. At present Russia and India are furnishing 70 per cent. of Europe's requirements. Indian shippers are holding back their grain, awaiting higher prices, realizing the requirements of Europe will become urgent later on. The movement of wheat from Russia is greatly curtailed

on account of the government using nearly all of the freight cars to transport troops.

WHEAT CROP OF UNITED STATES—COMPARISON FOR FOUR YEARS.

	Crop '01.	Crop '02.	Crop '03.	Crop '04.
On July 1.				
In farmers' hands	31,000,000	52,000,000	43,000,000	37,000,000
Visible supply	57,365,500	42,542,000	33,781,500	32,560,000
Total	88,365,500	94,542,000	76,781,500	69,560,000
Crop harvested	748,000,000	670,063,000	637,821,835	530,000,000
Total Available	836,365,500	764,605,000	714,603,335	599,560,000
Exports	234,000,000	202,906,000	119,441,719
Seeding	72,000,000	72,000,000	76,000,000
Domestic use	435,823,500	412,917,500	449,601,616	450,000,000
On hand end of crop ..	94,542,000	76,781,500	69,560,000
	836,365,500	764,605,000	714,603,335	

Note 1.—To have the same quantity in farmers' hands and in visible supply on July 1, 1905, as on July 1, 1904, we have but 4,000,000 bushels available for export.

Note 2.—The smallest quantity of wheat left in the United States at the end of a crop was on July 1, 1898, when we had but 41,229,000 bushels, as follows: In farmers' hands, 16,000,000 bushels; in visible supplies, 25,229,000 bushels; total, 41,229,000 bushels. It was in May, 1898, when wheat sold at \$1.85 per bushel in Chicago.

Note 3.—Should our stocks on July 1, 1905, be depleted to the same extent as on July 1, 1898, when we had but 41,229,000 bushels, in all positions, our exports could not exceed 32,331,000 bushels.

Note 4.—With a maximum 32,331,000 bushels available for export, how are we to supply the European demands, which, with the shortage abroad, must be greater than last year, unless prices are advanced to a level which will curtail consumption, both here and abroad.

Europe's demands on the United States last year were 119,441,719 bushels, notwithstanding the fact that Russia, India, and Argentina were drawn upon as never before. The exports from the United States for a period of ten years are as follows:

Year.	Exports.	Our total crop.	Percentage Exported.
1904,	119,441,719	637,821,835	18.8
1903,	202,906,000	670,063,000	30.2
1902,	234,000,000	748,000,000	31.2
1901,	216,000,000	523,000,000	41.3
1900,	188,000,000	547,000,000	34.3
1899,	222,000,000	675,000,000	32.8
1898,	217,000,000	530,000,000	40.9
1897,	145,000,000	427,000,000	33.9
1896,	126,000,000	467,000,000	26.9
1895,	142,000,000	460,000,000	30.8

Note 5.—If we export 32,331,000 bushels out of the 1904 crop (estimated as above 530,000,000 bushels), the percentage exported will be 6.1 per cent.

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Business Manager.

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To Advertisers.

We wish to impress upon our advertisers the necessity of sending in all advertisements and matter pertaining to advertising, by the 25th of each month. If it can be sent before that date, so much the better for both of us. There is not a month that passes that we do not leave out somebody's ad. because of it reaching us too late.

Trial Subscriptions.

For 10 cents, coin or stamps, we will send the SOUTHERN PLANTER for three months as a trial subscription. As hundreds of our readers will be in attendance upon all sorts of picnics during this month, we would very much appreciate it, if they will bring this little offer to the notice of their friends. In this way, we will be enabled to get hold of a lot of non-reading farmers. Once we get them to reading, we are sure that we can help them as well as ourselves.

Elkton Stock Farm Sale.

In our last issue we ran a half page ad. of the Elkton Stock Farm's sale, which takes place on September 6th. In the first paragraph, under the head of "Pure Bred Registered Herefords," the types made us say "the pick of several farmers' herds," when it should have been *famous* herds. Any one acquainted with Hereford blood can easily see why famous was the word intended, after reading that the offering is by such noted sires as Beau Donald, Actor 3d, Prince Rupert, etc. We hope that a good number of our readers will attend the sale and get some of the bargains which will be offered and encourage the Elkton Farm in disseminating good cattle in this section.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

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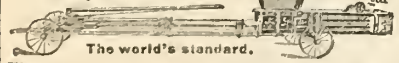
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And the only Patent Roof

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E. F. SCHLICHTER

1910 Market St. PHILADELPHIA, PA.

Also made by the Duplex Manufacturing Co., South Superior, Wis.

Mention the Southern Planter when corresponding with advertisers.

WITH THE ADVERTISERS.

The Ury Stock Farm starts the season's advertising with this issue. Holsteins and Berkshires, as usual, are offered.

Agricultural Lime, Hard Wood Ashes, Fertilizers, etc., are offered by Mr. Percy L. Banks. Refer to the ad.

Mr. E. R. Taylor guarantees that "Fuma" will kill all sorts and conditions of burrowing animals.

The Real Estate Trust Co. has a choice lot of Virginia farms for sale. This company would like to list your farm free of charge.

Angora Goats are advertised by several responsible parties in this issue.

A number of excellent farms, of various sizes and prices, are offered for sale in this number.

Messrs. Meyer & Jehne are offering a splendid pair of Percheron Mares for sale.

No doubt many of our readers will profit by reading the ad. of Mr. Davis T. Williams in another column.

Poland Chinas at farmers' prices and fanciers' breeding can be had of Mr. W. M. Jones.

Duroc Jersey Hogs are growing in popularity in this State. Mr. S. A. Whittaker is offering some nice pigs. Look up his ad.

Minor's Fluid, a splendid disinfectant and dip, is advertised by Mr. A. L. French, Southern Agent.

J. F. Durette has a splendid offering of Poland Chinas, Shorthorns and Shropshires.

Another new advertiser in this issue is the Benvenue Stock Farm. Aberdeen Angus Cattle are offered.

Mr. H. Swineford is offering some nice two-months old Berkshires.

The Medical College of Virginia has its announcement on another page. This splendid old institution is worthy of the patronage of our readers.

Look up the ad. of the Foos Mfg. Co. an excellent Corn Harvester is offered.

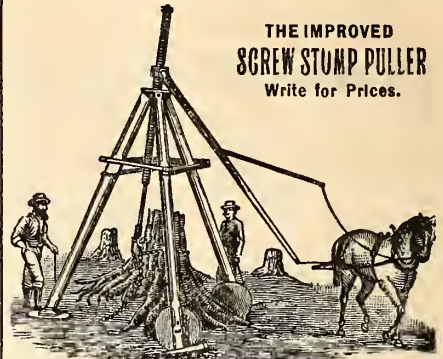
Sloan's Liniment has an attractive card on another page.

L. G. Jones is offering some superior Essex Pigs, which are guaranteed to give satisfaction, or money refunded.

A man who always goes about with a sore face and continues to use toilet and laundry soaps is not entitled to sympathy. He deserves censure. Only painful, sore, and even diseased, faces are to be expected. Such soaps are bound to bring such face trouble. They were never intended for the delicate skin of the face. Nothing but the purest, best shaving soaps should be used—soaps made specially for shaving. Williams' Shaving Soap is pre-eminently the best for the purpose. The advertisement elsewhere suggests a free sample—a good way to find out what really good shaving soap means.

THE IMPROVED SCREW STUMP PULLER

Write for Prices.



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

The Monarch Stump Puller.

The best on earth; you make no mistake in buying of a man of 5 years experience in pulling stumps. We set up the Puller and guarantee satisfaction before we want your money. 5 sizes. Write for catalogue and prices.

JOS. W. RITCHIE, State Agent, R. F. D. No. 39, Grottoes, Va.



Monarch Stump Puller

Will pull stump 7-ft. in diameter. Guaranteed to stand a strain of 250,000 lbs. For catalogue and discount on first machine address

MONARCH GRUBBER CO., Lone Tree, Iowa.

Make Your Own Fertilizer

at Small Cost with

Wilson's Phosphate Mills



From 1 to 40 H. P. Also Bone Cutters, hand and power, for the poultrymen; Farm Feed Mills, Graham Flour Hand Mills, Grit and Shell Mills. Send for catalogue. WILSON BROS., Sole Mfrs., Easton, Pa.



CLEAN, SAFE, DURABLE AND COMFORTABLE.

WALLACE B. CRUMB, FORESTVILLE, CONN. P. O. BOX 440

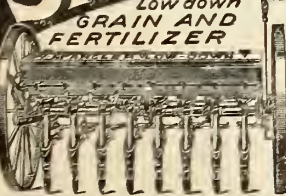
Easy Work
EQUAL TO
TEN MEN
SAFE AND QUICK
Sweet Fodder
No Ears Lost
Write for special price
FOOS
MFG. CO. SPRINGFIELD
OHIO
CORN HARVESTER



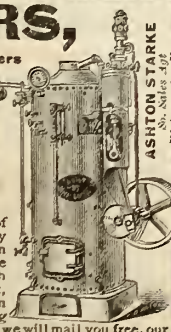
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The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. No complex gearing to get out of order. Boxes are close to ground. Fully Guaranteed.
Easily regulates quantity of seed or fertilizer, and sows with regularity.
Weight, Only 700 lbs.
Agents Wanted.
Write for Catalogue.
THE HENCH & DROMGOLD CO.,
Mfrs., York, Pa.



SPANGLER DRILL
Low down
GRAIN AND
FERTILIZER
Superior to all other drills. Even distribution of lumpy, damp or dry fertilizers. Increases crop profits. Big wheels, broad tires, low steel frame. Fully warranted. Write for free catalogue.
SPANGLER MFG. CO., 804 Queen Street, York, Pa.



PLANTERS,
farmers, ginners, cane grinders and others desiring a convenient and highly efficient power. Nothing equals this little outfit.
Leffel Engines
and boilers are the standards of excellence wherever known. They find a host of uses on plantation and farm and are so reasonable in price as to come within reach of all. We make them like cut, horizontal, mounted, etc., from 3 H. P. up. Write to-day telling us what you wish a power for and we will mail you free, our book entitled, "Power Economy and Efficiency."
James Leffel & Co., Box 124, Springfield, Ohio.



WEST POINT IN AUGUST, 1904.

(Mary Washington.)

As so many Southern parents have sons at West Point, your correspondent being on a visit to that place, fancies that some items about it may possess interest for the readers of the SOUTHERN PLANTER. Its location is so beautiful that I doubt whether even Switzerland can surpass it. Mountains and water combine to produce the perfection of scenery, whilst the stately buildings and military exercises going on upon the grounds lend life and animation to the scene. The young men receive the finest and most efficient training both mentally and physically; nor is their spiritual training neglected either. They have a very faithful and zealous chaplain, and the Y. M. C. A. seems to have taken firm root amongst them. "Duty, honor, country" is the official motto of the Academy, and it is the constant aim of the officers and instructors in charge to train their pupils to act up to this high standard. Absolute truthfulness is insisted upon, and should any of the cadets be guilty of prevarication, even if it should not come to the knowledge of the officers, it would expose the delinquent to such loss of caste amongst his comrades that existence would be scarcely endurable for him at West Point.

In summer the cadets go in camp, remaining there till August 28th, when they return to barracks. One class is annually allowed a furlough, those who have been there two years, and this is the only one they have till graduation, when, they are allowed to spend the summer with their families before being assigned to duty in the autumn. Study is intermitted in the summer, but the drills and other martial exercises go on as usual. It is a gay place in summer, with a large floating population, mostly feminine, and consisting mostly of mothers and sisters of the cadets. These young men thus receive the finishing touch of polish by association with refined and cultured women. Three nights in a week they have a hop in the beautiful Cullum Memorial Hall, built entirely for purposes of festivity, and it is a charming sight to see lovely young girls gliding along the brilliantly lighted ball-room (it has 340 incandescent lights on the ceiling), with the "spick and span" looking cadets, who dance with a peculiar and stately grace. Between dances they sit on the portico overlooking the Hudson, which (especially on a moonlight night) is beautiful as a dream. On the intervening three nights there is an open air concert, and the cadets sit out on the grounds with their relatives or other visitors. Indeed, there is always something interesting going on, and nothing delights the spectators more than the daily dress parade and guard mounting, which are accompanied by the animated strains of the brass band. You see mothers and sisters galore on

What Do You Think of This?

During the past year 15 farmers of Mesa County, Colo., have asked for our catalog about

Electric Steel Wheels

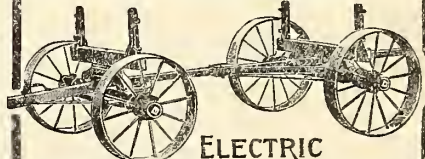
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Electric Handy Wagon

Up to date 14 of them have purchased either a wagon or a set of wheels.

Does that mean anything?

It proves that we have a reasonable proposition. We say that the Electric wide-tired, steel



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Electric Wheel Co.

Box 146

Quincy, Illinois.

BUGGIES

SURRIES,
DAYTONS,
RUNABOUTS,



SPINDLE WAGONS, CARTS,

etc. 8' different styles and grades. Finest material and workmanship. Get our prices and see our vehicles before purchasing. **SAFETY BUGGY CO., 1309 E. Main street, Richmond, Va.**



WE'LL PAY THE FREIGHT

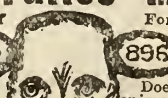
and send 4 Buggy Wheels, Steel Tire on, - \$7.25 With Rubber Tires, \$15.00. 1 mfg. wheels 3/4 to 4 in. tread. Top Buggies, \$28.75; Harness, \$3.60. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. W. V. BOOB, Cincinnati, O.

Running Streams
will force their own waters or water from springs to your buildings, fields or storage tanks, any height or distance with the
Rife Hydraulic Engine.
The power that's always going with animals. Marker filed 4 letters or figures \$2.25 postpaid.
out attention or expense. Sold on 30 days trial. Book free. Ask for it!
RIFE ENGINE CO., 126 Liberty Street, New York.



Burch Tattoo Marker

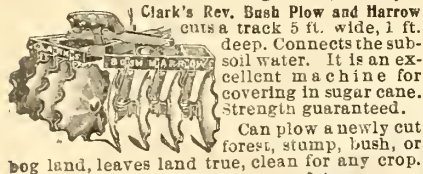
For use in Ears of Horses, Cattle, Sheep, Swine and Dogs



For purposes of identification it is a veritable detective. Does not disfigure animals. Marker filed 4 letters or figures \$2.25 postpaid.

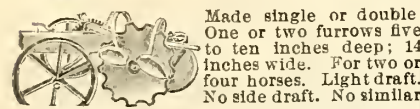
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F. S. BURCH & CO., 144 Illinois St., Chicago.

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Clark's Rev. Bush Plow and Harrow cuts a track 5 ft. wide, 1 ft. deep. Connects the subsoil water. It is an excellent machine for covering in sugar cane. Strength guaranteed. Can plow a newly cut forest, stump, bush, or bog land, leaves land true, clean for any crop.

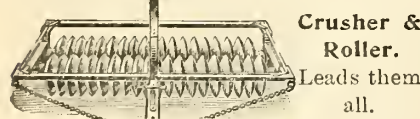
Clark's Double Action Cutaway Harrow moves 15,000 tons of earth in a day. Send for Circulars.



Made single or double One or two furrows five to ten inches deep; 14 inches wide. For two or four horses. Light draft. No side draft. No similar plow made. When Clark's grass tools are used as directed in his grass circular, we, the C. H. Co., guarantee them to kill wild mustard, charlock, hard hack, sunflower, milk weed, morning glory, Russian thistle or any other foul plant that grows, or money refunded. Now is the time to commence work for next year's seeding to grass.

THE CUTAWAY HARROW CO.,
Higginum, Ct., U. S. A.

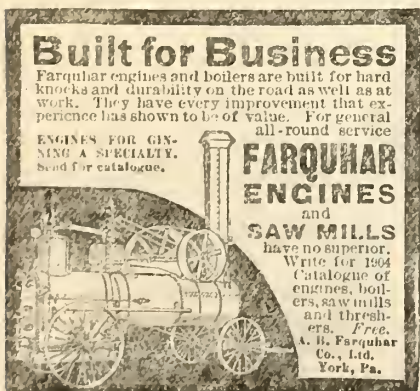
Imperial Pulverizer, Clod Crusher & Roller.



Send for Circulars. The Peterson Mfg Co., Kent, O. We also manufacture old reliable Rice Heaters.



Pat. and mfd only by us. Also Lath, Shingle and Slave Mills, Planers, Water Wheels, etc. Cheapest and best Hay Baler. We Pay the Freight. **DELOACH MILL MANUFACTURING CO.** Box 600 Catalog Free. Atlanta, Ga.



Built for Business

Farquhar engines and boilers are built for hard knocks and durability on the road as well as at work. They have every improvement that experience has shown to be of value. For general all-round service

ENGINES FOR GRINDING A SPECIALTY. Send for catalogue.

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have no superior. Write for 1904 Catalogue of engines, boilers, saw mills and threshers. Free. A. B. Farquhar Co., Ltd. York, Pa.

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Pocket Knives
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WE ARE AGENTS FOR GOOD THINGS.

this occasion, straining their eyes to detect in the ranks the gallant boy who is the especial object of their interest.

Amongst the exercises (or diversions) practiced at West Point is the game of polo, on which the bystanders look with an interest rendered more intense by the sense of danger attending it. Only the cadets of the first class are allowed to participate in this, as it requires a very skilled rider. Football is the foremost of all games with the cadets, as it is at all the colleges. Every November the West Point and Annapolis football teams meet in Philadelphia and have a contest, in which West Point has always, of late years, come out victorious. A family having one son in the army and another in the navy (as so many have) would be quite perplexed as to which side of this contested game they should sympathize with. In addition to its intrinsic merits and beauties, West Point possesses a peculiar interest to Southerners from the fact that nearly all of our great heroes were trained here—Lee, Jackson and others belonging to the Confederate Army.

"The goodliest fellowship of famous knights whereof this world holds record."

It is easy to see that West Point is proud of these men, almost as much so as the South is. They feel somewhat of the same sentiment expressed by Jeremiah: "Is Ephraim my dear son? Is he a pleasant child? For since I spake against him, I do earnestly remember him still." They earnestly and proudly remember still our great Lee, Jackson and other heroes.

One of the first things that attracts a Southerner's eye on entering the vestibule of the West Point library is a printed list of the graduates who became generals in the Confederate army. Of these there were 8 generals of the first order, 14 lieutenant-generals, 45 major-generals, and 79 brigadier-generals. A few amongst these were men of Northern birth, who had married or settled in the South, and who cast in their lot with us.

In the library I found an entertaining book on "Life at West Point," the author of which says: "During the twenty years or more that preceded the civil war the men were graduated who made that war the most notable one in mankind's history, and the most imposing one of modern times in the numbers of men engaged on both sides. The civil war, as far as leadership went, was an exhibition of the practical results of West Point training. The greatest men on both sides were graduates of the Military Academy. It is interesting in this connection to trace the different branches of service from which the leading Confederate generals came. Lee (class of 1829), and Beauregard (1838), left West Point as engineers. Early (1837), A. P. Hill (1841), D. H. Hill (1842), Longstreet (1842), Jackson

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Will fit uneven ground without cutting. Every part can be stretched perfectly. Made of

high grade galvanized steel wire. All horizontal lines are cables, making it stronger. Has finemesh at the bottom for small chicks. We also make extra heavy for gardens, lawns, etc. The largest poultry farms are using this fence—over 700 rods by Lakewood (N. J.) Farm Co. We pay freight and satisfy every one or no sale. Can ship from N. Y., Chicago, or San Francisco. Write for free catalog of Farm, Lawn and Poultry Fencing.

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Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip Lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

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If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

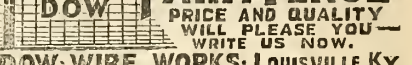
INTERNATIONAL FENCE AND F. CO.
Columbus, Ohio.



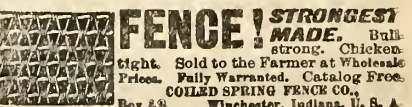
THERE'S NO SUBSTITUTE
for Page Fence, if you need Page Fence quality.
Page Woven Wire Fence Co., Box 57 Adrian, Mich.



Many designs. Cheap at wood. 32 page Catalogue free. Special Prices to Cemeteries and Churches. Address: **COILED SPRING FENCE CO., Box Q Winchester, Ind.**



DOW WIRE WORKS, LOUISVILLE, KY.



WIRE FENCE at Wholesale. A 48-inch stock fence 29¢ per rod. Send for price list and FREE catalogue of Wire Fence and full line of Fence supplies.
W. H. MASON & CO., Box 80 Leesburg, Ohio.

FOR SALE CHEAP.

A HARDING HUMMER ENSILAGE and FEED CUTTER, No. 14, almost new (Blower). Requires 10 horse power; my engine only 6 horse reason for selling. Price, \$60 cash f. o. b. Cost \$108. A. L. FRENCH, Byrdville, Va.

Winter Turf Oats

The Largest Yielding,
Heaviest Grain, Finest Quality
Oats Grown.

As hardy as wheat if sown early. Not attacked with fly or rust. Stand up well. Afford the finest Fall, Winter and Spring pasture, and afterwards yield 60 to 70 bushels per acre of the finest, heaviest, grained Oats grown.

OUR FALL CATALOGUE

Gives information about the best seeds for Fall sowing. Contains improved Seed Wheat, Barley, Rye, Rape, 1,000 Headed Kale, Alfalfa, Grass, Clover, and Vegetable Seeds. Mailed Free. Write today for Catalog No. 423.

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"How to Grow Paper-Shell Pecans"

FREE, if you mention Southern Planter. Best varieties in U. S. True to variety. Clions cut from bearing trees by member of firm. Full descriptive Catalogue of ALL FRUIT trees, free.

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Reliable Seeds.

Crimson and White Blooming German Clover, Rape, Vetches, Alfalfa, and all varieties Grain and Grass Seeds. We have a nice stock of ONION SETS and GARDEN SEEDS for fall planting. Write us for quotations. Mail orders given prompt attention. Send us your orders and you will get good seed every time.

DIGGS & BEADLES,

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RICHMOND, - - VIRGINIA.

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"FUMA"

kills Prairie Dogs, Woodchucks, Gophers, and Grain Insects. "The wheels of the gods grind slow but exceedingly small." So the weevil, but you can stop their grind with "Fuma Carbon Bisulphide" as others with "Fuma Carbon Bisulphide" are doing. EDWARD R. TAYLOR, Penn Yan, N. Y.



EarLabels
for SHEEP, HOGS
and CATTLE, from
\$1.00 per 100 up.

Best on the market. Send for Free Catalogue Stockmen's Supplies. F. S. BURCH & CO., 144 Illinois St. Chicago.

(1846), and Johnston (1846), were all infantrymen, whilst Ewell (1840) was of the Dragoons, and Stuart of the mounted rifles."

In looking over a scrap-book in the library, filled with clippings relating to West Point, my attention was arrested by the subjoining one, taken from "The Oregonian," Portland, June 12, 1902:

"In our great civil war distinguished graduates of West Point fought on both sides of the terrible conflict. The number of graduates who served in the Confederate army were 299, and of these 151 became general officers. There are more West Pointers proportionately found amongst prominent Confederate generals than on the Union side, the Confederates having from the outset relied more on their West Pointers, and less upon political and militia officers than the North. Out of the civil war, on both sides, came the lesson that in a long war the trained soldier makes the best general. Hundreds of volunteer officers made brilliant brigade commanders before the close of the war. Some made excellent division commanders, but not more than three or four proved themselves able to command an army corps. The truth is, the South carried over to its cause proportionately more of the talent of West Point than the North. Among prominent Confederate Generals were Lee, Beauregard, Bragg, Joe Johnston, Sydney Johnston, Stonewall Jackson, Longstreet, "Jeb" Stuart, Pickett, Heth, Early, S. D. Lee, A. P. Hill, D. H. Hill, Ewell, Hardie, Van Dorn, McLaws, Bee, Wheeler, Field, Wilcox and Pegram. The Union army included Grant, Sherman, Sheridan, Hancock and many other stout leaders of superior ability, but the Confederate list carries with it a higher military average."

In a clipping from another paper (The New York Times) I read the following: "West Pointers, professionally, are equally as proud, and with as good reason, of the Confederate generals as of those on the Union side."

Jefferson Davis was also a graduate of West Point, and was amongst the many Southern officers who distinguished themselves in the Mexican war. In 1860, about nine months before the civil war broke out, Jefferson Davis was appointed to head a board for examining into the system of instruction and discipline at West Point, and recommending changes, conducing to greater efficiency, but the war came on so soon afterwards that the recommendations of the board were not acted on.

Robert E. Lee was appointed superintendent of West Point in 1852, a position which he held until 1855, when he was promoted Lieutenant-Colonel of the Second Regiment of cavalry, with which he served in Texas.

Mention the SOUTHERN PLANTER in writing.



Warranted
to give satisfaction.

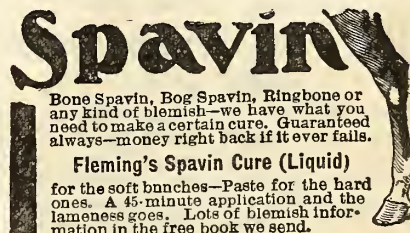
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A safe, speedy and
positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.



Fistula and Poll Evil

Do yourself what horse doctors charge big prices for trying to do. Cure Fistula or Poll Evil in fifteen to thirty days.

Fleming's Fistula & Poll Evil Cure

is a wonder—guaranteed to cure any case—money back if it fails. No cutting—no scar. Leaves the horse sound and smooth. Write for our free book on diseases and blemishes of horses.

FLEMING BROS., Chemists,
230 Union Stock Yards, Chicago, Ill.



NEWTON'S Heave, Cough, Diarrhoea and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strong recommendations. \$1.00 per can. Dealers, Mail or Ex. paid. The Newton Remedy Co., Toledo, Ohio.


NO MORE BLIND HORSES.

For Specific Optic Almia, Moon Blindness, and other Sore Eyes, Barry Co., Iowa City, Ia. have a sure cure.

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OATS AND RYE
to produce large, full grains require
a complete fertilizer rich in

POTASH



BOOKS FREE
Write to-day for our valuable
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New York—93 Nassau Street, or
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SEED OATS FOR SALE.

**1,200 Bushels Virginia Winter
Grey or Turf.**

These oats were sown in the Fall; are of
a very superior quality and **EXTRA HEAVY**.
Grown in Albemarle County, in the Pied-
mont section of Virginia, where the best seed
oats obtainable are produced. Samples sent
on application. Address **WOODSIDE STOCK
FARM, P. O. Box 145, Charlottesville, Va.**

THE NUT NURSERY CO. MONTICELLO FLA.

Growers of **FANCY** and **RARE VARIETIES**
by grafting in all of the more important
species of nuts. We have probably the
FINEST STOCK OF GRAFTED PECANS in
the South. Catalogue for the asking. **J. F.
JONES, Manager.**

Strawberry Plants, Trees, etc.

\$1.60 buys 1,000 nice young **STRAWBERRY
PLANTS**, and if you are not satisfied with
them, you can get your money back. Send
for free catalogue. **JOHN LIGHTFOOT, R.
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Extra Fine Seed Grain For Sale

Golden Chaff wheat }
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All these varieties are strictly No 1 seed
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Price wheat \$1.50; Oats 75 cts per bushel.
W. M. WATKINS and SONS, Saxe, Va.

NOTES FROM THE WEST.

Notwithstanding that Minneapolis is the wheat converting centre of the country, the average wheat yield of Minnesota is only that of the average of the United States—about 14 bushels per acre. Fourteen bushels—how ridiculously meagre? Five years from now it will be much larger. Why, again? Because the State has one of the best State Farms and Experiment Stations in the country, and its work in wheat breeding has become famous in the cereal world. The State Farm has bred wheat with increased yield of 18 per cent. This means an increase, upon the same acreage, of fifteen million bushels of Minnesota No. 1 red spring wheat. It would mean an increase as applied to the whole United States of nearly three bushels per acre, or over a hundred million bushels. The process is simple, as related to me by Professor Hays, the State Agriculturist. The first step is simply a matter of selection. Each wheat seed is self-pollinating, and it will come true to seed. In a bushel of wheat there are various kinds. Some of the seed will produce at the rate of 15 bushels per acre; some at 20 bushels, and some perhaps at 25 bushels, on good land. It is a question of selecting out the best seed. The first year's step is to take some good wheat and plant a large number of grains, about four inches apart. Out of the whole lot the very best 50 grains are selected and planted the following year. Out of this crop the best 50 are selected, which will be better than the 50 of the preceding year. And so on for several years. Finally, after eight or ten years 50 wheat kernels will result much superior to the original seed, and, as in the case of Professor Hays' experiment, these were then planted for seed, and as soon as a sufficient amount had been accumulated, distributed among farmers and seedmen, who are rapidly introducing the improved seed throughout the State in place of the common seed. The more complex part of the experiment is the artificial crossing or hybridizing of different plants of this improved sub-variety. Professor Hays believes it is not too much to expect that 15 bushel wheat can be selected and bred up first to 20 bushel wheat, and later to 25 bushel wheat.

"But I would not dare predict this," he said, "because people are impatient for immediate results, and such accomplishments are secured only by long and patient, systematic effort." Professor Hays' accomplishments, however, already performed, even should they go no further, rank him as one of the foremost of the scientific agriculturists of the day who do things.

The appointment of W. M. Hays, Professor of Agriculture in the University of Minnesota, prominently mentioned as the President's probable choice for Assistant Secretary of Agri-

Popping of lamp-chim- neys is music to grocers. MACBETH.

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Don't take but few square yards to pay more dividends than a whole farm planted in anything else. Send stamp for particulars, prices, etc. **J. L. GIBSON, Bryson City, N. C.**

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FARM MAPS.

Have you a map of your farm, or is your old map torn and falling to pieces? I make a specialty of farm map making, and should be glad to make you a nice map. If you haven't a map, copy the metes and bounds from your deed (be careful in copying), and mail to me; or if you want your old map copied, mail it to me. My maps are made on best quality mapping cloth (doesn't tear or fade), and look well framed and hung on the wall. Are you satisfied that your farm contains as many acres as you paid for? or are you buying or selling land and wish to know the area without going to the trouble and expense of a new survey? If so, let me calculate the area for you from the old notes on your deed. Many of our old surveyors were very careless with their calculations, and I may save you many times my small charge for calculating.

My charges are: For maps, \$2.00 each; for calculating area, 10 sides or under, \$1.00; 10c. extra for each side over 10.

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Civil Engineer and Surveyor, 336 Main St., Danville, Va.

VIRGINIA DIVISION.

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Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Baby Raccoons, Foxes, Etc.

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culture, would bring to that office not only one of the most practical farmers of the country, but a man thoroughly abreast of the times regarding the needs of greater agricultural education in the country schools. In fact, Professor Hays is considerable in advance of public thought upon this subject, and is, along with a few other far-sighted educators, endeavoring to drag public opinion after him.

"By their fruits ye shall know them." This instructor of young men and women is not a theorist. He has educated hundreds of boys and girls in better methods of farming, and they have gone back to the farm to make of that business the greatest possible success. Minnesota and the northern Mississippi Valley owe much to him, and his appointment as Assistant Secretary of Agriculture would greatly broaden the scope of his valuable work. Secretary Wilson and Professor Hays entertain the highest regard for each other.

A Washington man who holds a government position has a fine little flock of hens and sells from two to six dozen eggs a week, besides what his family consumes. He asks from two to four cents more for his eggs than the store price, according to the season. He gets it, and he could sell twice as many eggs right among his fellow clerks. Why? Because they all know that these eggs are absolutely fresh, and only the city dweller, who has to eat stale and limed eggs, knows how to appreciate fresh ones. If this can be done on a small scale by personal contact between the producer and the consumer, it can be done on a commercial basis by any farmer or poultry owner, providing he takes the same care which the Washington government clerk does.

Have you read Kipling's "Jungle Book," in a chapter of which he tells about Letting in the jungle? The inhabitants of the jungle make it so uncomfortable for the man family of a nearby community by concerted attacks, that the humans leave the vicinity in despair and in a short time the jungle, with its rapid growth of vegetation, again holds full sway and all but obliterates the efforts of puny man to reclaim it from the wilderness. In a recent trip through such prosperous farming States as Maryland, Ohio, Indiana and Illinois, I noted many instances of the letting in of the jungle. Land which had been bravely cleared and planted to cultivated crops had been, after a few years, allowed to go back and to grow up to weeds, brambles and scrub. No dangerous wild beasts lurk therein, but the seeds of sloth, indolence and bad management had everywhere sprung into prominence, and the land has become well-nigh as unproductive and as non-contributing to the human community as did the Indian jungle. Year after year

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No. 36.—275 acre farm in Fairfax. Fine quality of grain and grass land. Good buildings. Refined and educated citizens. Price, \$7,000.

See April and May issue of SOUTHERN PLANTER for description of the above farms, and write for my farm list and full information.

W. E. MILLER,
HERNDON, VA.

goes by and such lands lie practically idle, sustaining useless growths, where, by a little foresight and small guidance, the stores of fertility might be converted into useful and sightly groves of nut, post or wood-bearing trees, even admitting that it is impracticable to work farm crops. There will never be a lack of a good market for locust or catalpa posts, railroad ties or telegraph and telephone poles, and there is no latitude or longitude in the country where some useful and profit making tree will not make a merchantable growth on the poorest soil. The years slip by rapidly, and useful, quick growing trees soon add large value to vacant land. If eight or ten years does not bring them into actual marketable condition, it increases the value of the land they occupy, just as a two-thirds matured crop of wheat makes land more valuable than that which lies fallow; only that land once planted to trees yields a continuous annual crop for a man's lifetime.

Experiments recently made in France for the purpose of ascertaining the nutritive value of salt for sheep show that sheep which had been fed salt gained in weight four and one-half pounds more than those which received no salt. Moreover, the sheep which received salt produced one and three-fourths pounds more wool and of a better quality than those which received no salt.

A report from Tennessee shows that the farmers of that State spend annually about \$1,500,000 for fertilizers, whereas the droppings from the one million head of cattle of all classes in that State, according to results obtained at the Ontario Agricultural Station, are worth about \$40 a head a year. It will be seen that an appalling waste is going on when one considers how insignificant an amount of stable manure is being placed on our farms.

The English are great consumers of bacon. A vast majority of the people of that country eat bacon for breakfast at least six mornings out of seven throughout the year.

GUY E. MITCHELL.

"CHICKEN CHAT."

This is the title of a very valuable little book issued by the Zenner Disinfectant Company, 93 Bates street, Detroit, Mich. It describes all diseases to which poultrydom is heir and gives a remedy for them. Everybody who keeps fowls, in either small or large numbers, should send for a copy of the book, which will be furnished free by applying to the above address.

The rain it raineth every day
Upon the just and unjust fellows;
But, chiefly on the just, because,
The unjust take the just's umbrellas.

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No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

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"THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,
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25, 50, 100, 500, 1,000 and 2,000 acre tracts. Some of these highly improved and convenient to schools, churches, steam and trolley lines. Send for our new catalogue. HOCKADAY, CASSELMAN & CO., Box 257, Richmond, Va.

630 ACRE FARM

Near Keysville, Va., for sale at \$4.00 per acre. This farm is well wooded and watered; about half of it is in original growth timber valued at several thousand dollars. Am anxious to sell. Correspondence invited. T. E. ROBERTS, Chase City, Va.

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The best locations, choicest lands in Virginia. Grains, Grasses, Fruit, Poultry, Dairy, Stock. For information address REAL ESTATE TRUST COMPANY, Richmond, Va.

Owners desiring to list farms in new catalogue now in preparation will write at once to W. M. Cary, Manager Farms Department. No charge for listing property.

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in Russell county, Va., for sale; fine grain and blue grass farm, under a high state of cultivation. Finely watered, containing five large limestone springs. Can be purchased reasonable. Parties interested are requested to call and see or address STEELE BROS., Raven, Va.

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THE LABOR DIFFICULTY.

Editor Southern Planter:

In the July number of The Planter, I noted an article by Mr. Camm Paterson, and his utterance in regard to the labor situation in the South especially caught my attention. As we have all felt the necessity of an improvement in the quality of labor on the farm for some years past, I beg to call attention to the means employed by some of the Northwestern States to add to the supply of good farm labor in the past. I think that both Minnesota and Wisconsin have in past years sent commissioners to Europe, especially to the Scandinavian countries, to encourage emigration to their States. The result was an annual stream of emigrants from those countries, who, in a short time, not only became good farm laborers, but skilled and trusted help in factory and office, and some of the most prosperous and law-abiding citizens of those States. The situation must be growing desperate when men can make propositions like the one made by Dr. Laferty, viz.: the introduction of Chinese coolie labor on the farm. In the first place, a Chinaman will not become a citizen, and for that reason the United States has seen fit to exclude him by law, and, if the law should be repealed, there would be the race problem in his case—the same as we now have with the negro—and I have my doubt about the Chinese coolies being more trustworthy laborers than the negro.

Mr. Editor, my question is this: If we have to supplant the negro with other labor, why not get a good class of white labor, that will eventually make good citizens, and add materially to the wealth and producing power of the State. I have often thought of calling the attention of our excellent Commissioner of Agriculture, Mr. Koiner, to this fact, and I have no doubt that if the scheme was tried it would prove successful, as it has in other States.

I may state here that I am a Norwegian myself, moved here from Minnesota a few years ago to make Virginia my future home. I see grand opportunities for the agriculture of this State, but the present labor situation blocks the way of progress. I would like to see more in The Planter about this question. Let the Commissioner of Agriculture take this question under consideration, and correspond with agricultural societies in the States mentioned about this matter.

M. O. ELTON.

ABOUT THE BEST FOR BLISTER.

Leesburg, Va., March 24, 1904. The Lawrence-Williams Co., Cleveland, Ohio:

I have used GOMBAULT'S CAUSTIC BALSAM quite a good deal, and I think for a blister it's about the best I ever used. I wish your remedy every success.

CHAS. MOTT.
Manager Mayfield Stud Farm.

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White Leghorn

Cockerels for sale. Exhibition or breeding stock. Address

C. G. M. FINK,

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Piedmont Poultry Place,

"Handles nothing but the best."

We now offer Pure-bred POLAND-CHINA Pigs for sale. We will not sell under 8 weeks old. Single pig \$6; per pair \$10; per trio, \$14. Some ready for shipment May 15th. First orders get best pigs.

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Black Devils and Red Cubans.

Where they won, Sharon, N. Y., 4 out of 5 Blue Rock, Pa., 2 out of 3. Clarion, Pa., 1 straight. Roanoke, Va., 8 out of 9. Akron, Ia., 2 straights. Eggs, \$2 per sitting. Young trios, quail size, \$3.

THOS. W. JARMAN, Yancey Mills, Va.

FOR SALE.

MAMMOTH BRONZE TURKEYS, B. P. R. CHICKENS, TOULOUSE GEESE. Two Holstein Friesian Heifers. Five large English Berkshire Pigs. Prices reasonable, and satisfaction guaranteed. MRS. W. F. JACKSON, Olga P. O., Amelia county, Va.

Barred Plymouth Rock

Cockerels and Pullets for sale at prices as low as you pay for common chickens. Good, healthy stock. Address Mrs. W. A. EDWARDS, Irwin, Va.

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has for sale a number of

S. C. B. LEGHORN COCKERELS.

Early hatched. \$1 each. F. C. LOUHOFF, Yancey Mills, Va.

LIGHT BRAHMAS.

Pure bred stock from prize winning strains. Old and young stock for sale. Hens, \$1.50; roosters, \$2.50; pullets, \$1; cockerels, \$2.00. J. H. FRASER, Cartersville, Va. (Cumberland county).

Pure Bred

Barred Plymouth Rock

pullets for sale. Price, 30c. to \$1, according to age, if taken at once. WM. B. LEWIS, Irby, Nottoway county, Va.

Pure-Bred Buff Orpington

Cockerels for sale; \$1 up, depending on quality. Write me what you want. T. M. KING, Queensland Farm, R. F. D. 2, Hagan, Lee county, Va.

SUMMER DESSERTS.

There is a theory among some housekeepers that the luscious fruits of summer constitute an all-sufficient dessert during the hot months. They will fix up grapes, peaches and pears in fanciful pyramids, with leaves about them and a knot of ribbon or flowers on top, and waste time in carving out rosy slices of watermelon instead of going to work and making some dessert which would satisfy an old-fashioned person like myself. For my part, I prefer something more premeditated and less simple.

I am not advocating any elaborate course that will cost a lot and make you work too hard. Peach ice cream is a favorite sweet dish with every one, and if you have plenty of soft, ripe peaches, it can be easily made. Before beginning, examine the machinery of your freezer to see if it is in good running order. Grease every part lightly, and be sure to put a little lard or oil on that socket in the pail in which the knob of the freezer turns. Crack up the ice in small lumps and have a little bucket of salt ready, and the main difficulty is over, for if your freezer is in good order and if it is "The Queen," you will have done in thirty minutes from putting in the cream.

Take one gallon of morning's milk and sweeten with one cup of white sugar and pour into the freezer. Turn rapidly ten minutes. By that time it will begin to freeze. Have ready two quarts of soft peaches, mashed fine and sweetened with two cups of white sugar. Add this to the milk and stir well. Fasten up the freezer and turn for twenty minutes, and a dainty, refreshing dessert is ready. Cover closely with newspapers until you are ready to serve it, and mark my words, the men of the family will think you the sweetest, most industrious girl in the country, especially if you perform this loving service with a smiling air, instead of posing for a martyred angel.

Another summer dessert we are fond of is baked peach dumplings. Take one quart of fruit, add two teaspoonfuls of baking powder before sifting, and work into it one cup of butter or lard, and then a cup of sweet milk. Roll out thin and cut into little squares, wrap a peeled peach in each of these pastry blankets and put side by side in an ordinary bread pan. This amount ought to make twenty dumplings. They take thirty minutes to cook with a quite hot fire. Take two cups of sugar and mix into a smooth paste with a half cup of butter and a half teaspoonful of powdered cinnamon to each of the dumplings, or you can have just butter and sugar as a sauce.

You can serve this same pastry for any kind of baked fruit dumplings, apples, damsons, any kind of berries or preserves. Only for small fruit, roll out into one large sheet instead

30 ANGORA GOATS

For sale at
reasonable Prices.
Kids in Pairs.



C. H. WINE, Brandy Station, Va.

MANSFIELD**STOCK FARM**

1 2-year-old 3-4 Male Angora, \$7.00.

1 1-year-old 3-4 Male Angora, \$5.00.

4 Kids, Male Angora, \$3.00.

Pure, but unregistered, 16 mos. old.

1 Dark Jersey Bull, out of 7 Lb. Cow, \$15.

1 Steele Jersey Bull, out of 8 Lb. Cow, \$15.

Also 1 nearly new Star Pea Huller, cost \$25. Will sell for \$20. Used one season only. Hand power. Will thresh and clean 6 bushels per hour. W. E. HAMMOND, Goochland C. H., Va.

Wanted—Prices on 40 good grade sheep, delivered at my station, Maldens, C. & O., Va.

Angora Goats

Several very high grade buck kids (from registered sire $\frac{3}{4}$ grade does), look like pure breeds. For sale at only \$5 each, F. O. B. Don't write but send check with order to

A. L. FRENCH, Byrdville, Va.

Also high class registered Angus cattle.

Angora Goats

8 pure bred, young females and 1 male, for sale. E. L. TOMPKINS, Fine Creek Mills, Va.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Clifty, Ky.

Edgewood Stock Farm.**SCOTCH COLLIES**

A beautiful litter of sables and blacks, full white marks. Bred strong in blood of Christopher, Barwell Mystery, and Doon Marvel. Sire and dam grand drivers, great workers. Pups now ready at \$10 and \$8. Eligible to registry. Get photos. H. B. ARBUCKLE, Maxwellton, W. Va.

COLLIE PUPS

By Imported Sires. Sable and white and tri-colors. Prices \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents: FREE if you buy a Collie.

MAPLEVONT STOCK FARM, South Athol, Mass.

CHICKENS

for sale. B. P. ROCK, S. C. B. LEGHORN and WHITE WYANDOTTE. Fine pure bred stock. Prices reasonable. Write Miss CLARA L. SMITH, Croxton, Caroline county, Va.

3 Thoroughbred Mares FOR SALE.

VOLEE, B. M. Foaled 1891, by Volante, winner of the American Derby, and son of Grinstead and Sister Ann, by imp. Gleneige. First dam imp. Lady Trappist, dam of five winners, by Trappist; second, Vic by Albert Victor; third, dam Modena by Parmesan, etc. This mare is a winner, and has a ch. c. Foaled May 19th by the Great Trial winner Cbiswick, by imp. Mr. Pickwick—Alice ruce by Fellowcraft. Price of mare and colt, \$350.

DEABLESSE, B. M. Foaled 1896, by Montfort, son of imp. Mortemer and Revoit, by Lexington. First dam, Miss Grace (sister to Diablo), by Eolus; second dam, Grace Darling, by Jonesboro; third dam, Ninetta, by Revenue, etc. This mare has a filly foal, which will not be sold, so mare cannot be delivered until early in September. Price, \$300.

DARTEE, Br. M. Foaled 1900 by imp. Water Lever, sire of Isonomy and Water Lily, by Lord Lyon. First dam, Fearnot, by Jim Gray; second dam, Fearless, by imp. St. Blaise; third dam, imp. Dauntless, by Macaroni, etc. This mare has won races. Price, \$300.

All of these mares are fine individuals, and are royally bred, and all have been bred, and are believed to be in foal to the young imported horse, Aldine, by St. Simon. First dam, Ronaldina, by Barcadine; second dam, Lady Ronald, by Lord Lyon; third dam, Edith, by Newminster, etc. Address

WILLSON CHAMBERLAIN,
R. F. D 2, Charlottesville, Va.

FOR SALE

A fine team of gray

PERCHERON MARES

weighing about 2800 pounds, 6 and 7 years old, very active, fine workers everywhere, both safe in foal to the great gray Percheron stallion DOM PEDRO, No. 15558, recently sold at a long price to Messrs. Hicks & Hopkins, of Mathews Co. Price of mares, \$400. If convenient, will trade in a good driver for part payment. MEYER & JEHNE, Farmville, Va.

One Registered

Thoroughbred Stallion

for sale. Also, 2 highly bred brood mares and several colts, 1, 2, and 3 years old. N. B. COOKE, Taylorsville, Hanover county, Va.

Percheron Stallions

For sale; 2 years old and older; bred from the best families in America; pedigrees tracing to imported sire and dam; nothing but imported stallion used at the head of stud; prices right.

D. T. MARTIN, Salem, Va.

PURE-BRED

Percheron Stallion

for sale. Age, 5 years; weight, 1,500 pounds. E. H. DeBUTTS, Linden, Va.

OAK-HILL FARM

SADDLE HORSES, JERSEY
AND ABERDEEN ANGUS CAT-
TLE, BERKSHIRE HOGS,

—FOR SALE—

Shipping point Oak-Hill, Va., (Station on farm)
on D. & W. Ry. 15 miles west of Danville, Va.

SAM'L HAIRSTON,
Wenona, Va.

of cutting into inch squares as for apples or peaches, and filling the middle of the sheets with fruit, roll up and pinch the ends well together. Some people put a teaspoonful of sugar in each dumpling before baking, but this never tasted really good to me. I prefer a honest bowl of sauce or the strength found in an unaffected plate of butter and sugar sauce.

ALICE WINSTON.

SYDNOR PUMP & WELL CO.

Special attention is called to the ad. of the Sydnor Pump & Well Co. in this issue. This company closed a contract with the United States Government army officials at Manassas, Va., on July 30th for a system of water works to supply the troops encamped at this point during the army manoeuvres to be held from September 2nd to 12th. It embraced the drilling of twelve artesian wells, the installation of about nine miles of pipe, seven 10,000-gallon tanks and towers, twelve Charter gasoline engines in connection with four hundred and fifty shower baths in connection with a large quantity of small galvanized steel watering tanks and other similar fixtures. One of the provisions of the contract called for the completion of this work by the 25th of August. It is quite a tribute to the ability of the personnel of the company that they have not only complied with the contract, but have put in extra work, all of which has been completed on time. This shows that the Southern people are becoming better equipped every day to compete with Northern firms. This company not only makes a specialty of complete water supply system, but install complete plumbing systems in connection therewith in country residences, and number among their customers in work of this character, the Ramsay's, at historical old Westover; Mr. Jos. Bryan, Mr. Wm. Rueger, Richmond, Va.; the Jno. A. Dix Ind. School, Dinwiddie, Va.; Mr. David Dunlop and Mr. W. H. Woody, Petersburg, Va.; Mr. I. J. R. Muurling and Mr. J. K. Maddux, Warrenton, Va., the old Page Homestead, at "Oakland," (birthplace of Thos. Nelson Page,) Hanover county; Mr. Murray Boocock and Mr. L. Pugh, Keswick, Va.; and, in fact, they are so well known in this class of business for reliability and first-class goods that the best of the trade naturally goes to them. Besides this work, they sell boilers and engines for farm purposes, gasoline engines, windmills, compressed air storage tank systems, pumps of all kinds, iron and wire fences, sawmills, saws, etc. Any one being in need of any material of this kind would do well to correspond with them. Their Charter Gasoline Engines are so widely and favorably known that not long ago they received an order for an engine to be shipped to the Southern Methodist church for Board of Foreign Missions at Shanghai, China.

ELLERSLIE FARM

**Thoroughbred Horses
AND SHORTHORN CATTLE,
Pure Southdown Sheep
and Berkshire Pigs.**

FOR SALE. R. J. HANCOCK & SON,
CHARLOTTESVILLE, VA.

KENTUCKY JACK FARM

A fine lot of KENTUCKY bred and big BLACK SPANISH Jacks and Jennets; also 1 and 2 year old Jacks; young stock for sale at all times. Write or see me before you buy. Come to Kentucky if you want a good Jack. JOE E. WRIGHT, Junction City, Ky.



Virginia Bred Jack,

A fine one, for sale. 2 years old 10th last June. He is large for his age, and a perfect beauty. Will sell cheap for cash. Write or come to see J. E. THOMASSON, Bumpass, Va.

BURKES' GARDEN

DORSETS

I have a few pure bred RAMS and some good GRADE EWES for sale at prices within reach of all. SAM'L T. HENINGER, Burke's Garden, Va.

Woodland Farm

offers the best lot of October dropped Dorset Ram lambs which it has ever raised.

J. E. WING & BROS., Mechanicsburg, O.

DORSETS AND HEREFORDS

H. ARMSTRONG, Lantz Mills, Va.

V.P.I. Farm Bulletin

We have for sale at present, some splendid

DORSET RAM LAMBS.

For prices, etc, address

D. O. NOURSE, Prof. of Agr.
Blacksburg, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

The only soap that won't smart the face—Williams' Shaving Soap.

Sold everywhere. Write for booklet "How to Shave."

The J. B. Williams Co., Glastonbury, Ct.

O. I. C. Everybody Wants One. 4 MONTHS OLD.

O. I. C. Boars \$12.50 Each.

Young stock cheaper. Cannot be beat.

Mansfield Stock Farm,
W. ELLIOT HAMMOND, Goochland C. H., Va

PURE-BRED

O. I. C. PIGS

for sale. Weight of sire, over 400 pounds, mother 290 pounds. Will make more meat than any other breed of hogs from the same feed. Price, \$4.50 each or \$3 per pair. J. E. THOMASSON, Bumpass, Va.

Poland-Chinas and Chester Whites

AT FARMER'S PRICES.

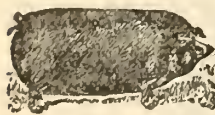
S. M. WISECARVER, - - Rustburg, Va.

Salt Pond Herd.

DUROC JERSEYS

Home of Paul J. 21625, Also Lulu's Pet 40434. Pigs of March and May farrow for sale. Write for what you want.

S. A. WHITTAKER, Hopeside, Va.



Registered P. Chinas Berkshires C. Whites. Large strain. All ages mated not akin, bred sow, service boars, Guernsey calves, Scotch Collie pups, and Poultry. Write for prices

and free circular. **P. F. HAMILTON,**
Cochranville, Chester Co., Pa.

SHAKESPEARE & OWENS,
Best in their Lines

At THE CEDARS, KENNELS, POULTRY LLEWELLYN SETTERS, BEAGLE and STOCK FARM are bred the finest HOUNDS, JERSEY CATTLE, DUROC JERSEY SWINE, M. B. TURKEYS, and B. P. R. CHICKENS. WM. G. OWENS, Midlothian, Va.

Essex and Poland China

pigs from 8 weeks to 4 mos. old, an extra choice lot. Also some choice Southdown and Hampshire down Sheep and Lambs. For prices address



L. G. JONES, Tobaccoville, N. C.

WHEN VISITING THE WORLD'S FAIR RIDE ON THE FERRIS WHEEL.

The great Expositions held during the last fifteen years have produced two marvelous examples of engineering and constructive ability. One of these, the Eiffel Tower, was designed and built by a Frenchman at Paris for the Exposition of 1889; the other, the Ferris Wheel, was designed and built by the late Geo. W. G. Ferris for the World's Columbian Exposition at Chicago, in 1893.

Paris again held a great Exposition in 1900, but failed to produce any feature to take the place of the Eiffel Tower. In America, St. Louis, in 1904, planned and produced the greatest Exposition the world has ever seen. Scores of attempts were made to invent something more wonderful and more attractive than the Ferris Wheel, but as Paris failed to outdo her own Eiffel Tower, so did St. Louis fail to equal the far-famed Ferris Wheel of the World's Columbian Exposition of 1893. Arrangements were accordingly made to bring the Ferris Wheel to the Louisiana Purchase Exposition, and it was given a location near the geographical center of the grounds.

The Cascades, the Plateau of States, all the big buildings, the Pike, Festival Hall, the Art Building, Foreign Buildings, Philippine Reservation, the Air Ship Enclosure; in fact, every point of interest in the grounds can be seen from the big wheel. In addition, one gets a view of St. Louis, the Mississippi River, and the beautiful forests, hills and dales for fifty miles around. At night, the view of the illumination of the buildings and grounds is simply magnificent. Eye has not seen nor ear heard of a more striking spectacle than the night view of the great Exposition from the top of the Ferris Wheel.

Hundreds of thousands of incandescent lights bring the outlines of all the buildings in bold relief. The Festival Hall and the Plateau of States are flooded in turn with white, red and green lights, making a startling and very beautiful effect. The best point to view this grand illumination is from the Ferris Wheel.

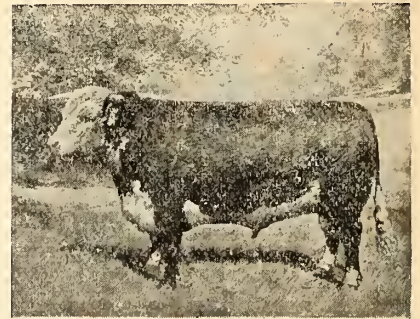
When you come to the Fair, do not fail to ride upon it.

THE IMPERIAL PULVERIZER.

The Peterson Manufacturing Company, Kent, Ohio, send us a copy of the United States Trade Reports, an implement journal, giving an account of the personal examination by its editors of the Imperial Pulverizer and Clod Crusher. The result of the inquiry must be eminently satisfactory to the Peterson Manufacturing Company, inasmuch as the editors pronounce the machine as positively the best thing of its kind on the market. Look up the advertisement elsewhere in this issue and send for circulars, etc.

GREAT HERD BULL FOR SALE

Marquis of Salisbury 16th
AT A BARGAIN.



The best son of IMPORTED SALISBURY 76059. ALMOST AN EXACT COUNTERPART OF HIM. In this young bull is a rare combination of the best foreign and best America strains of blood, through his sire we have Boniface, the Grove 3d, Pioneer, Horace, Pirate, Monarch, St Thomas and Lord Wilton, while through his dam we have the Earl of Shadeland 22d, Anxiety Monarch, Sir Richard 2nd, Anxiety, the Grove 3d, and Garfield. Write us.

See our large add on another page.

ROSEMONT FARM,
Berryville, Clarke, Co., Va

LARGE
YORKSHIRE PIGS

for sale, from pure bred, registered stock; fine litter farrowed June 26th; also one service boar 14 mos. old registered. C. H. SOUTHWICK, Asheville, N. C.

High-Class Poland Chinas



Best registered blood. Strong-boned, healthy pigs, either sex. 2 mos. old, for \$5.00, all eligible to registry and first class. None but good ones shipped.

E. T. ROBINSON, Lexington, Va.

ORCHARD HILL PURE-BRED

POLAND CHINA

Pigs and brood sows for sale. Also a fine Guernsey Bull Calf and S. C. B. Leghorn Eggs. **F. M. SMITH, JR.,**
R. F. D., 4, Charlottesville, Va.

"Feeds and Feeding"

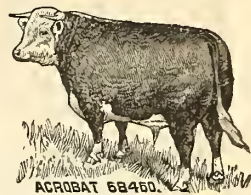
Prof. Henry's Great Book for
Farmers and Stockmen.

Delivered anywhere for - - \$2.00
With the SOUTHERN PLANTER, 2.25

Mention THE SOUTHERN PLANTER when corresponding with advertisers.

HEREFORD CALVES AT BARGAIN PRICES.

IF YOU ARE NOT PREPARED TO PAY CASH, WE WILL GIVE YOU TIME. NOW IS THE TIME TO BUY FOR FALL SHIPMENT SOUTH. Calves by IMP. BRITISHER, last year Champion of ENGLAND AND AMERICAN; PROTECTOR, imported from ENGLAND at a cost of \$6,000; ACROBAT, the GREATEST living HEREFORD SIRE, cost the unprecedented price of \$8,500, at nine years of age, sire of the \$3,700 CHAMPION CARNATION; LARS, JR., a good son of the old CHAMPION LARS; BEAU DONALD, and others. Now is the time to buy, before the advance which is sure to come. Get in the BAND WAGON, while you can get in CHEAP. Send for our HERD CATALOGUE, an encyclopedia of rich HEREFORD pedigrees, embellished with cuts of our cattle, also containing some words relative to the great ACROBAT, 68469, our chief stock bull. A large plate picture of ACROBAT will be sent to all who will frame it, size 14x18 inches.



OUR BRIEF HISTORY OF HEREFORD CATTLE, being a book of some 40 pages, will soon be ready for distribution—be sure to send for a copy. OUR HERD is the LARGEST and BEST in the SOUTH AND EAST, numbering 70 HEAD of the very FINEST and FANCIEST specimens of the breed maintained in our rich BLUE GRASS pastures, in the VALLEY of the SHENANDOAH, insuring the best possible development of bone and muscle. We always have on hand a choice lot of females, of the choicest blood lines, bred and open. OUR CATALOGUE TELLS THE TALE—be sure to get one. Inquire about our fine BRITISHER, PROTECTOR, BEAU DONALD and ACROBAT calves—we will send you a full and honest description, or better, visit us and make your own selection. Remember, we will give you time to make payments, if you wish. Look for our ad. next month, and address us to-day as follows:

ROSEMONT FARM

Clarke County,

= = = =

Berryville, Va.

W. J. CARTER, ["BROAD ROCK"]

Turf Journalist and
Pedigree Expert...

Address P. O. Box 929, Richmond, Va., or 1102 Hull street, Manchester, Va.

Representing the Times-Dispatch and Southern Planter, Richmond, Va.; Kentucky Stock Farm and The Thoroughbred Record, Lexington Ky.; Sports of the Times, New York, and the Breeder and Sportsman, San Francisco, Cal.

FOR SALE.

Standard and Registered Trotting Mare,

rich bay, elegantly bred, young and sound. Bred to Kelly, 2:27, and in foal.

Address W. J. CARTER,
Box 929, Richmond, Va.

1904.

WOODMONDE AND HATTONDALE FARMS

BURLINGTON

"The Gentleman in Black,"

Winner of the Criterion Stakes, Pelham Handicap, Brooklyn Derby, Belmont, Trial and Tidal Stakes.

Black horse, by Powhatan, dam imp. Invercauld, by St. Albans; 2d dam imp. Eleanor, by Voltigeur; 3d Themis, by Touchstone; 4th dam Rectitude (dam of Latus, Dr. Caius, Chivalry and Aristides), by Lottery; 5th dam Decision (dam of Brown Stout XXX and Silvio), by Magistrate, etc., etc. BURLINGTON will make the season of 1904 at J. E. Lane's above named farms at Esmont, Albemarle county, Va.

Fee \$50 with usual return privilege if horse is alive and in my possession.

For particulars address

J. E. LANE,

Esmont, Albemarle County, Va.

For Sale to Reduce Stock.

THREE BROOD MARES, all trotters, and richly bred. Bargains. Address

ROBERT TAIT, Norfolk, Va.

1904.

1904.

1904.

KELLY, 22283.

Record 2:27. Sire of McChesney, 2:16 $\frac{3}{4}$, etc. Bay horse, by Electioneer 125; first dam, Esther, dam of Expressive 3, 2:12 $\frac{1}{2}$; Express, 2:21, etc.; by Express, etc. Kelly represents the highest type of a trotter, having fine size and the form and finish of a thorough-bred. For terms of service address

W. J. CARTER, Richmond, Va.

Kelly will serve at my private stable, 1102 Hull street, Manchester, Va.

GREAT STAKES, 25521.

Record 2:20.

Sire of Captain, 2:16 $\frac{1}{4}$; Foxhall, 2:19 $\frac{3}{4}$; etc. Bay horse, by Biely Thornhill, 2:24; dam, Sweetstakes, by Sweepstakes and Great Stakes; sires speed and good looks.

Fee, \$25 the season.

Address W. H. NELSON,
1428 E. Franklin st., Richmond, Va.

Richardson Brothers,

613 Brook Ave., Richmond, Va.,

BUILDERS OF

Wagons and Carriages,

A select lot of business and pleasure Vehicles on hand.

Repairing neatly done. Orders by mail solicited.

BERKSHIRES

ANNEFIELD HERD

Contains the

Finest Blood Lines

In England and America.

Young Stock for Sale.

Inquiries cheerfully answered.

EDW. G. BUTLER, Annefield Farms,
Berryville, Virginia.

BERKSHIRE PIGS FOR SALE

We have on our Hollybrook Farm a fine lot of young Berkshire Pigs from 8 to 12 weeks old, for sale. These pigs are from registered stock, and are first-class in every respect. Our pigs have free range, with fine stream of running water through the hog pastures, and our stock is as vigorous and healthy as possible. Price either for boar or sow pigs, \$5 each, crated and delivered on cars, or to express office at Richmond. Address orders to HENRY W. WOOD, Box 330, Richmond, Va.



OUR herd represents the very best strains of imported Large English Berkshires. Choice stock at reasonable prices.

Address

Cottage Grove Farm,
P. O. Box 5, Greensboro, N. C.

BERKSHIRES.

On sale, fine, vigorous Boars and Sows, February and March, 1904, farrow. Very cheap at \$10 each until Sept. 15th. 3 Reg. Sows will farrow this month. The pigs, sired by MASON OF BILTMORE, II 68548, will be booked at \$6 each, or \$10 pair, delivered Charlottesville when 10 weeks old. NONE BUT BILTMORE BLOOD IN MY HERD. ROBERT HIBBERT, Charlottesville, Va.

Berkshires

Best ENGLISH and AMERICAN blood. Herd Boars: Columbus Lee VIII (brother of Combination); Workman of W. (sire, Jack of all Trades). Stock for sale at prices YOU CAN AFFORD TO PAY. H. W. FUGATE, Fugate's Hill, Russell county, Va.

THOROUGH-BRED...

**Berkshire Boars,
Dorset Buck Lambs,
Jersey Bull Calves.**

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centreville, Md.

A DRILL THAT EVERY GRAIN GROWER NEEDS.

The United States produces nearly one-third of the grain crop of the entire world. This great yield from the soil of America is due, in large measure, to the improved machinery used by the American farmer, and particularly to the method of sowing the grain; automatic grain drills being extensively used by the progressive grower.

A model machine of this description is the Pennsylvania Low Down Grain and Fertilizer Drill, invented and made by the A. B. Farquhar Co., Ltd., of York, Pa. This firm was the first to design and put on the market a low down drill, doing away with the cumbersome cog gear and substituting sprocket wheels and chains.

The Pennsylvania is a handy drill, simple in construction, and extremely light draft. It has the regulation four-foot driving wheels, but the frame is hung below the axle, making the hopper very low. It sows accurately under all conditions. The fertilizer attachment is constructed on a new principle, making it an absolute force feed. It sows the dampest brands of phosphate with ease and regularity.

The Improved Pennsylvania Low Down Drill is a pet specialty of the Farquhar people, and it well deserves the great success it has met with. The A. B. Farquhar Co. issue an interesting booklet about their drills, which is mailed free on application.

Akron, Ind., Aug. 14, 1904.

Dr. Jos. Haas, V. S., Indianapolis, Ind.:

Dear Sir:—About six or seven years ago my hogs all died from cholera and I did not have a hog of any kind on my place for two or three months. But not wishing to abandon the hog industry I then bought some fine and apparently healthy breeding stock and within a week after getting them on my place they took the cholera. I had little faith in doctoring hogs with this disease, but, through the influence of a friend, who recommended your remedy, I purchased some of it. My hogs were so sick they would not eat, but I mixed the remedy with a little warm milk and after many efforts finally succeeded in getting my hogs to eat it. In three days they were getting better, and in a short time fully recovered. They made me a fine lot of breeding stock, and I have some of their progeny yet. Have had no trouble with my hogs since until recently, when some of my young brood sows were taken sick. One died the day before I received your remedy, but the others have all fully recovered since I began feeding it. Yours truly,

CHAS. J. PETERSON.

"I," said the orator, "come of a good old stock, rooted deep in the soil—" "The only stock I ever heard of that rooted deep in the soil," interjected a farmer in the audience, "was hogs."

RED POLL CATTLE

Best for Milk, Butler and Beef.

Poland China Pigs.

Shetland Ponies.

Pure-Bred Fowls.

Arrowhead Stock Farm,
Charlottesville, Va.

PURE-BRED

BERKSHIRE

Pigs ready for delivery this month. Two months old and a nice lot they are. Correspondence solicited. H. SWINEFORD, Richmond, Va.

HAWKSLEY STOCK FARM

Has for sale, a choice lot of

English Berkshires Pigs

Can furnish pairs not akin. A few young Boars ready for service; all of the choicest breeding. J. T. OLIVER, Prop., Allen's Level, Va.

Pure-Bred Registered

BERKSHIRE

Boar and Sow for sale. Price, \$25 each. Sow will farrow about last of October. Splendid young animals weighing about 250 pounds each. F. MAXWELL, CONNER, Box 316, Richmond, Va.

30 PURE-BRED

SOUTHDOWN EWES

lambs for sale. Price, \$15 each, October, 1904, delivery. This flock was originally purchased from Henry Webb, Babraham, Eng., and crossed from time to time with the descendants of Rams bought by John Hohart Warren from Lord Walsingham, of England. WM. JOHN, Linden, Va. (Mgr. Col R. H. DULANY).

Meadow Brook SHROPSHIRE.

For sale; very fine one and two year old pure bred SHROPSHIRE BUCKS; some very nice ewe lambs. C. A. SAUNDERS, Meadow Brook Stock Farm, Culpeper, Va.

REGISTERED

SHROPSHIRE SHEEP.

Only a few more of my flock of registered Shropshire sheep left; Rams, Ram Lambs, Ewes and one fine Ewe Lamb. Now is the time to buy at a very low price. Can mate them not akin. Get my prices before buying.

H. R. GRAHAM, Chestertown, Md.

25 REGISTERED

HOLSTEIN and GRADE

Milk Cows for sale. Most of them to calve this fall. H. W. MANSON, Crewe, Va.

COTTAGE VALLEY STOCK FARM.

FINE STOCK

FOR SALE LOW

7-8 and 15-16 GRADE ANGUS BULLS AND HEIFERS from 6 months to 2 years old. One bull calf half Angus and half Short-horn. Fine Buck Lambs out of Shropshire Ewes by Reg. Dorset Buck. Fine family milk cows fresh young and gentle. One pair splendid 1200 lbs. Bay Mares 6 yrs. old, first class all round farm teams and very good roadsters. Silver Lace Wyandotte Cockerels and Pullets at one dollar each.

W. M. WATKINS & SONS, Saxe, Va.

Aberdeen-Angus Bull Calves For Sale

Born as follows: Dec. 15, 1903; Jan. 30, 1904; May 15, 1904; June 2, 1904; Aug. 11, 1904. Calves will be kept with their dams until 9 mos. old. None sold younger, and NOT SOLD AT ALL AS BULLS, unless they turn out good specimens of the breed.

I shall also be ready to part with my herd bull, "ROCKBRIDGE ABDUCTOR," 40364, Nov. 1st. He will be 5 years old Dec. 2, 1904.

The two calves first mentioned are pure bred and very promising youngsters, but out of unrecorded dams; the three last are registered. I am willing to exchange "ABDUCTOR" or any of the above calves for a suitable herd bull, not less than 18 mos. old. B. F. DAY, Glasgow, Va.

MONTEBELLO HERD

ABERDEEN-ANGUS CATTLE.

FOR SALE—Registered Bull calves from 3 months old, up.

L. H. GRAY, Orange, Va.

ROSEDALE HERD

Aberdeen-Angus Cattle.

Choice bulls, 4 mos. to 4 yrs. old. Prices as low as good breeding will permit. Inspection of herd and correspondence invited.

ROSEDALE STOCK FARM, Jeffersonton, Va.

3 REGISTERED

Aberdeen Angus Bulls,

6, 10 and 16 mos. old, for sale. Sired by the celebrated GOLD NUGGET, 29657. These bulls are grand individuals. Address BENVENUE STOCK FARM, Massaponax, Va.

Mention the SOUTHERN PLANTER in writing.

THE ANGORA GOAT.

Angora Goats should be pure white, and weigh at maturity 50 to 100 lbs. for females, and 100 to 125 lbs. for males. They get their growth in about three years, and live to be 10 to 15 years old. They breed once a year, and drop a kid in five months from service. If you have goats drop their kids in January, and lose any, the doe will go to the buck again, and drop in June or July. They are not as apt to have twins as sheep, but occasionally do. They are not apt to disown their kids, if goats have not too large a range; but, on the large range, the goat knows to be left behind the flock is to be left perhaps forever. While in enclosed pastures the doe realizes that the flock can not be far away, and stays with her kid. They hide their kids away, same as a cow her calf, and go to them to let them suck. I have shut a doe in the barn at night, when she had twins laying in a hollow tree in the pasture, and she made no fuss about them. The kids, after they get dry and filled with milk, will stand lots of cold.

Goats shear from one-half to nine-teen pounds of mohair, according to breeding and condition of the goats, and it sells for from 15c. to \$3 per pound, according to length, freeness from kemp, etc. Usual price this year, 25c. to 35c. per pound; 50,000 pounds. Origan hair, said to be as good as any produced in the United States, changed hands at 34c. I received for my clip 34c. on board cars here.

Goats are browsers not grazers. Goats are hustlers to gather a living, but are also lazy animals. If brush and weeds are plentiful, a goat will go out, and in two hours will gather enough to last him 6 or 8 hours, and will then lay in the shade and chew his cud. They take all the first years' growth of bushes, weeds, etc. I see in my pastures where they have bitten off poke-berry stalk as thick as a man's thumb, and left nice blue grass, white clover and orchard grass ankle deep. They will completely kill all kinds of brush, except persimmons, shell-bark, hickory and black walnut; hickory and walnut they will eat as last resort, but persimmons, never. In winter, goats will peel almost all kinds of brush and saplings, except hickory. I have saplings 5 inches in diameter peeled 5 feet high. These are elm, bass-wood and maple. They dearly love sassafras, sumac, spice-wood, elm, bass-wood, chestnut, dogwood, maple, etc. In Virginia they will live on pine and cedar all winter, if fed a little grain. Goats should not be fed at the shed where they sleep; make them go out into the woods to eat their grain or fodder. Last winter I had three flocks, one of 21 bucks and wethers, in a brush enclosure of about six acres, with an old abandoned coal-bank for shelter; they going into the entries, which were dry; another of 100 at a place with a good bank barn, and 75 acres of brush,

PLEASANT VALLEY STOCK FARM

Shorthorn

calves from fine milking stock.

Yorkshire Pigs

of prolific breed.

JAMES M. HOGE, Hamilton, Va.



COOK'S CREEK HERD

SCOTCH - TOPPED SHORTHORNS...

Herd Headed by Governor Tyler, 158548, 1st prize aged bull at Radford Fair, Young Bulls and heifers for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

SHORT HORN BULLS

for sale, from 3 to 20 mos. old; sired by VERBENA'S CHAMPION, No. 129881, and ROYAL CHIEF, No. 185432. Some good POLAND CHINA spring pigs and 2 nice fall boars. All stock eligible to record. Rare bargains for quick buyers.

WM. T. THRASHER, Springwood, Virginia,

JERSEY BULL

an inbred grandson of EXILE OF ST. LAMBERT (who has more than 90 tested daughters in the list) for sale or exchange. He is 3 years old, and all right. A. H. HODGSON, Athens, Ga., or F. M. Hodgson, West Falls Church, Va.

A FINE

Jersey Bull

for sale. 3 years old and registered; also 1 yearling and 1 this year's bull calf, entitled to registry. J. B. JOHNSON, Clover Hill Farm, Manassas, Va.

The Woodside

Jersey Herd.

Bull Calves and Yearlings Richly Bred.

DAVID ROBERTS, - - Moorestown, N. J.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.



None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 4 to 6 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop.- Battleboro, N. C.

about one-eighth mile from barn. Another bunch of 23 at home, with straw-stack and barn. The 21 were fed about one-eighth of a mile from coal bank; the 100 were fed at barn, and the 23 could not get out of yard. The 21 peeled brush all winter, the 100 did not peel any until I took to feeding them out in the woods, the 21 would not eat either corn fodder or straw, and lived on bark and the little corn I gave them, and did fine. The 100 just laid around the barn and ate straw, corn fodder and their grain, and did no good until I compelled them to go out for their feed. When once away from the barn they would stay out and browse all day, but, rather than start would almost starve.

Goats can be turned with almost any kind of fence. An ideal goat fence is barbwire, with board at bottom, or some of the 2-foot woven wire hog fences, with a barbwire on top, makes a good fence; but one board at bottom adds to all fences for goats, as they cannot creep under so easily.

Never use a diamond mesh fence for goats, as they get their head and horns through and get fast. Never have perpendicular wires less than one foot apart. A rail fence of 8 rails high will turn most of goats, but it must have no lock at the corner. A rail fence with two stakes at each corner, wired together across the fence with some barb wire, makes a very good goat fence; put barb wire to the stake on the side of the fence next to the goats, about six inches above the top rail, and on outside of stakes, so when goat goes to climb upon the fence he will run against the barbwire.

The flesh of the Angora Goat is superior to mutton; the skins make beautiful rugs, and can be tanned at home and colored any color you wish and retain their lustre.

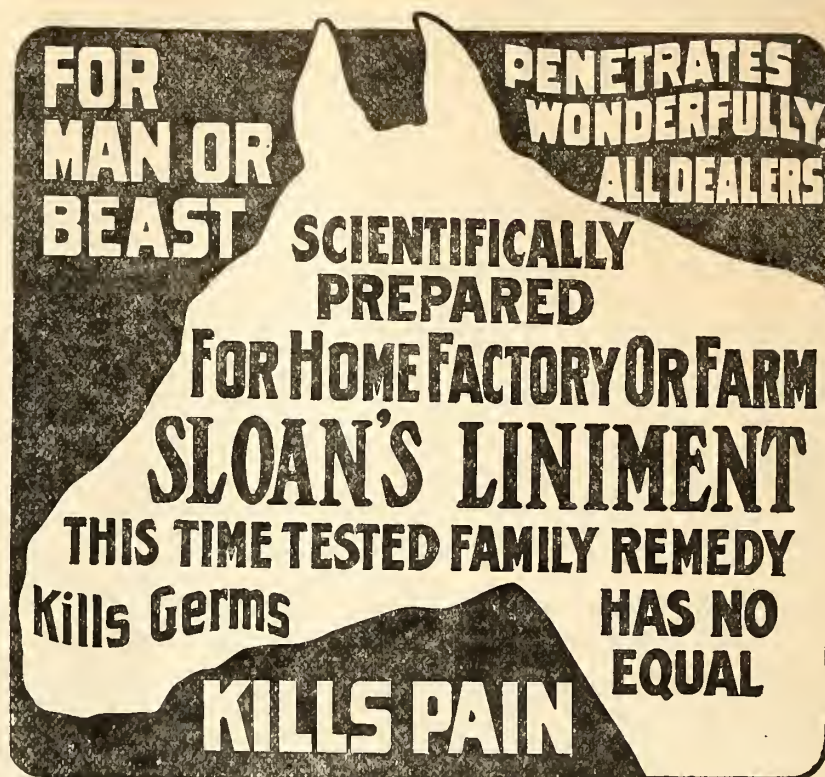
Goats will do well with all kinds of stock but hogs. They will not eat anything that the hogs have touched. No stock objects to goats, and cattle will feed after them and do well; also horses.

Some writers claim that 30 Angora Goats will clear as much land in a year as a man with a mattock. No sprouts on land cleared with Angora Goats.

J. H. HARPSTER.

SHEEP AND SHEEP DIP RECORD.

Messrs. William Cooper & Nephews, makers of Cooper Sheep Dip, send us word that they came out victorious at the Royal Show of England, which was held last month. They won the first prize for a Shearling Shropshire ram and first prize for a pen of three Shearling Shropshire ewes. They also won a good number of seconds and thirds. A census taken on the show ground showed that of the 1,075 sheep exhibited 998 had been dipped in Cooper Dip; of the 125 exhibitors, 115 were users of Cooper Dip.



FOR MAN OR BEAST **PENETRATES WONDERFULLY. ALL DEALERS**

SCIENTIFICALLY PREPARED

FOR HOME FACTORY OR FARM

SLOAN'S LINIMENT

THIS TIME TESTED FAMILY REMEDY

Kills Germs **HAS NO EQUAL**

KILLS PAIN

:- WE SUPPLY :-

ALFALFA BACTERIA

in the shape of

INFECTED SOIL

from an old two acre Alfalfa plot which has given us 3 or 4 good cuttings yearly for the past five years, and is still doing well. Price, \$1.00 per bag (in 4 bag lots) of about 100 lbs.; more than 4 bags, 75 cents each; f. o. b. Midlothian.

J. B. WATKINS & BRO., Hallsboro, Va.

ALFALFA

The Most Useful and Profitable Crop you can grow. The best time to sow (in the South) is from August 15th to September 15th.

Prepare your ground carefully, and to insure

a stand USE ALFALFA BACTERIA INFECTED SOIL as recommended by the Agricultural Experiments Stations.

You can secure enough of this infected soil to inoculate ONE ACRE OF GROUND for \$1.00 per bag (about 2 bushels) F. O. B. EWELL FARM.

Send in your orders now and shipment will be made when you are ready.

A booklet, giving practical directions for raising Alfalfa sent with each order.

Address GEO. CAMPBELL BROWN, Ewell Farm, Spring Hill, Maury Co., Tenn.

HEEBNER'S "Union" Feed and Ensilage Cutters

cut, crush and shred, making all the corn stalk palatable. Stock relish it—none wasted. Fodder equals hay in feeding value and the same ground grows two tons to one of hay. The ears are clear gain. Get the real value from your corn by using the only up-to-date fodder machinery. With shredder attachment (\$5 extra), you have three machines in one. Write for booklet.

HEEBNER & SONS, 25 Broad St., Lansdale, Pa.



STOCK CATTLE AND STOCK SHEEP



Long Distance Phone No. 2126.
Address: P. O. Box 204.
Pens: Union Stock Yards, Richmond, Va.

The season is coming for you to begin buying stock cattle or feeding cattle. If you are in doubt when and where to get them, write me. I can fill your order for any kind of stock, steers or heifers, you want, any kind of feeders you may want, and I will fill it correctly. Can furnish high grade and pure bred stock bulls (not registered) of any breed you may desire, at reasonable prices. If you want stock or feeding sheep, I can sell you ewes from \$2.50 to \$4.50 each, according to age, breeding and quality. **SOME FANCY BLACK FACES** at \$5 each. Good stock rams from \$7 to \$20 each. I will please you in any kind of stock I may sell you. If you have any kind of stock to sell, ship it to me. I **GUARANTEE HIGHEST MARKET VALUE**. I can place it because I have orders for all kinds. **SPECIAL attention GIVEN VEAL CALVES BY LOCAL TRAINS.** **NO CONSIGNMENT TOO SMALL—NONE TOO LARGE.** I GIVE ALL MY PERSONAL ATTENTION. **ACCURATE WEEKLY QUOTATION.**

ROBERT C. BRAUER, Successor to **Brauer Cattle Co., Richmond, Va.**

CEMENT RESOURCES OF THE VALLEY OF VIRGINIA.

Mr. Charles Catlett's paper on the "Cement Resources of the Valley of Virginia," recently published by the United States Geological Survey, in its bulletin (No. 225) entitled "Contributions to Economic Geology, 1903," is especially significant, as it is the first publication concerning the possibilities of cement manufacture in this particular field.

That section of Virginia which lies west of the Blue Ridge is bountifully supplied with materials suitable for use in the manufacture of Portland cement. All the conditions of the Lehigh district of Pennsylvania are duplicated in this region, with the additional advantage that the coal supply is much nearer at hand. At present only one Portland cement plant is in operation in Virginia, but, in view of the natural advantages offered by the western part of the State, it seems probable that a great extension of the industry will soon take place.

The argillaceous limestones of the Trenton formation, which furnish the well-known "cement rock" of the Lehigh district of Pennsylvania and New Jersey, are well developed throughout the Valley of Virginia. These limestones, with the overlying Hudson slates and shales, occur in a belt closely paralleling and in places touching the Valley Branch of the Baltimore and Ohio Railroad from the State line to Strasburg. From that point they lie close to the Southern Railway as far as Harrisonburg, and again from Harrisonburg to a point some miles south of Staunton, Va., they are near the Baltimore and Ohio Railroad. The points that naturally seem most desirable as sites for cement plants are those which give ready access to the coal fields, with favorable opportunities for the shipment of the finished product. It is thought, therefore, that the line of the Baltimore and Ohio Railroad between Harper's Ferry and Winchester, and Strasburg Junction, Riverton, Harrisonburg, and Staunton are the points in this State which would be

SUNNY HOME HERD OF Aberdeen Angus Cattle

has been reinforced for sale by the **WILLOW OAKS HERD** (property of Mr. T. B. Fitzgerald, former President of Riverside Cotton Mills, Danville, Va.). This herd was founded in 1902 by the purchase of a car load of the best females money would buy in Central Illinois. One of our customers writes as follows:

UNION, S. C., June 4, 1904.
DEAR FRENCH,—I have been at my farm and have taken several good looks at the two heifers. They are beauties, especially Miss Stubbs 2nd, and I am proud of them. Enclosed is my check for \$50.00 in payment for them. The bull, Carolina's Gay Lad, that you sent me last fall is one of the finest looking fellows I ever saw—is a daisy. Very truly,
W. R. WALKER.

Mr. Walker owns the largest herd of Angus in South Carolina. We make it a point to furnish the above-described sort of cattle. Write for circular and prices to

A. L. FRENCH, Byrdville, Va.

Station, Fitzgerald, N. C., on D. & W. Railway, 24 miles from Danville.



—The Delaware Herd of—

ROYAL ANGUS CATTLE

is not surpassed either in breeding or individual animals, by any herd in the East. At the head of our herd is **PRINCE BARBARA, 68604**, the son of the great \$3,100 Prince Ito. Females of equally choice breeding. Write your wants. Remember, we take personal care of our cattle; keep no high priced help; incur no expense of exhibiting; all of which enables us to offer stock at equitable prices. Send for pamphlet.

MYER & SON, Prop., - Bridgeville, Del.

Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. BERKSHIRES From noted strains; Imported Headlight, Lord Highclere and Sunrise.

—DORSET SHEEP—

B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

—URY STOCK FARM HERD OF— HOLSTEIN-FRIESIANS

DE KOL 2D BUTTER BOY 3D No. 2 heads our herd; his breeding and individual excellence are second to none. A few COWS, YOUNG BULLS and HEIFERS from our best cows, for sale. All the leading families represented.

ENGLISH BERKSHIRE pigs by such Boars as MANOR FAITHFUL, Imp.; wt. 1100 lbs.; FANCY DUKE, a double grandson of LOYAL BERKS; ESAU PRINCESS OF FILSTON, by ESAU, Imp. THOS. FASSITT & SONS, Sylmar, Md.

most attractive for cement factories. Mr. Catlett discusses in detail the advantages and disadvantages of the various feasible sites for cement plants. He gives analyses of the limestones found at each point.

The only Portland cement plant in the State is the plant of the Virginia Portland Cement Company, which is located at Craigsville. The conditions found there are typical of those existing at a number of places either on or near the Chesapeake and Ohio Railway, both in Virginia and West Virginia. Wherever these same beds of limestone are found in a good state of development, an opportunity, more or less valuable (the value depending upon the local conditions), is presented for the manufacture of cement.

THE ROSEMONT HEREFORDS.

The Rosemont Herefords occupy an original and unique position in the breeding world. The business is conducted on advanced lines, keeping pace with modern methods and requirements. Mr. Lee Roy Stacy, of Missouri, has charge of the business management, and is an expert in feeding, fitting, breeding, pedigrees, publicity, etc.

This herd numbers seventy head, and has been gathered without regard to cost. The cows are a grand lot, by such noted sires as Dale, Earl of Shadeland II., Perfection, March On, Acrobat, Corrector, Beau Donald, Crusader, Lamplighter, Salisbury, Conquero, and others. The great show cows, Bennison and Georgina, are also in the herd. The herd is headed by the great Acrobat, 68460, the greatest living Hereford sire.

Mr. Stacy is anxious for interested parties to visit Rosemont and see the stock for themselves. A trip to the beautiful Shenandoah Valley, in which Berryville is situated, is of itself worth any one's time. If you cannot go to the farm, write for what you want, and also ask for "A Brief History of Hereford Cattle," which also contains an article on the "Future of Herefords in America." It will be mailed free. Parties who cannot pay cash for stock will be accommodated by the installment plan. Look up the half-page ad, of this farm in this issue.

WHAT HAPPENED.

Mary had a little lamb

With fleece as white as snow;

The rest of all the tragedy

Perhaps you may not know.

It followed her to school one day,

According to the book;

Alas, the school where Mary went

They taught her how to cook!

—September Lippincott's.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

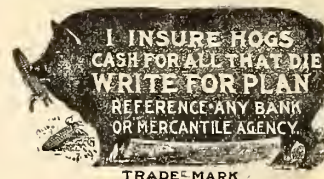
YOU MAKE NO MISTAKE

WHEN YOU DEPEND ON DR. HAAS' HOG REMEDY

to prevent and arrest disease in your herd. Twenty-eight years success, and to-day used by thousands of our leading breeders.

I INSURE HOGS, AND PAY CASH FOR ALL THAT DIE

when it is fed as a preventive. Full particulars in "Hogology." Prices, 25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid. Packages, \$2.50, \$1.25 and 50 cents. None genuine without my signature on package or can label.



"HOGOLOGY" FREE. LATEST REVISED EDITION.

I have just rewritten and revised "Hogology," my book about hogs, adding much matter on new and important subjects, and making it indispensable to those desiring information on this great subject. Sent FREE if you mention Southern Planter when asking for it. The only scientific book of the kind ever published.

JOS. HAAS, V. S., Indianapolis, Ind.

Large English Berkshires.

BOARS ready for service.

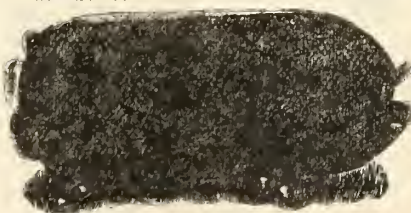
Pigs ready to ship.

Bred Gilt.

Forest Home Farm,
Purcellville, Va.

BERKSHIRES! ✿ ✿ BERKSHIRES!

The following up-to-date stockmen think my ROYAL BERKSHIRES the finest the world can show. I could print thousands of the same opinion, but I take only one from each State:



P. H. Rudd, Mariners Harbor, N. Y.; Col. F. C. Goldborough, Easton, Md.; J. M. Venable, Farmville, Va.; Edgar Long, Graham, N. C.; John C. McAfee, Chester, S. C.; Dr. S. W. Fain, Dandridge, Tenn.; President Bowdrie Phinizy, Augusta, Ga.; R. C. McKinney, Bassinger, Fla.; General Thos. T. Munford, Uniontown, Ala.; W. W. Cornett, Blue Springs, Miss.; J. M. Gann, Varnada, La.; B. P. Van Horn, Toyah, Texas; D. C. Lester, Hatfield, Ark.

Take no risk; confer with these people, and order direct from the veteran breeder.

THOS. S. WHITE, Passifern Stock Farm, Lexington, Virginia.

Five car loads bright Timothy Hay for sale, cheap.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



IS YOUR FARM FOR SALE?

If so, list it with us. No sale, no charge. Largest list of farms for sale in Virginia. Write for Free Catalogue.

R. B. CHAFFIN & CO., (INC.) Richmond, Virginia.

REPORTS.

United States Department of Agriculture, Washington, D. C. Bureau of Animal Industry. Circular 48. Scales of Points for Judging Cattle of Dairy Breeds.

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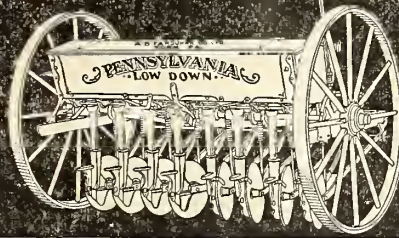
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Virginia Climate and Crop Service,

Best Machine on the Farm

PENNSYLVANIA
Low Down Grain & Fertilizer Drill

(DISC OR HOE)
The Original and Only Perfect Low Down Drill
Large hoppers; standard four foot wheels, with very low frame and hopper. Frame is hung below the axle. That's the secret. No cog gears to bother with. All chain drive direct from axle. Quantity of grain to be sown, and fertilizer, instantly regulated while drill is in motion. Positively the simplest, most accurate and lightest running drill on the market. Guaranteed to do satisfactory work. Write for FREE booklet.
A. B. FARQUHAR CO., Ltd., York, Pa.

Blue-Blooded Berkshires.

Two of my splendid brood sows, GEORGIA'S HIGHCLERE, 66136, and CAMEL, 64085, are just about to farrow, being in pig to my great Boar COLUMBIA, 60527. If you want something really choice and royally bred, you had better communicate with me at once. I am expecting large litters, as usual, but I will not have enough pigs to go around.

COLUMBIA, sired by FIRST CATCH F, is an imported Boar, and one of the best in the U. S. both in breeding and individuality. GEORGIA'S HIGHCLERE is of the best Highclere breeding, and would be very hard to beat in the show ring. CAMEL is an imported granddaughter of the celebrated Loyal Berks, and is, therefore, most fashionably bred. F. M. HODGSON, West End, Va.

GLENBURN
FARM BERKSHIRES

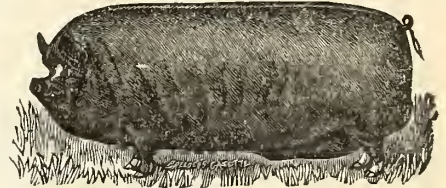
This herd is composed of four royally bred, imported sows, and an imported boar from the celebrated herds of Mr. Fricker and Mr. Hudson, England, and selected American bred animals from Biltmore and other noted herds. Dr. J. D. KIRK, Importer and Breeder, Roanoke, Va.

THE - OAKS - STOCK - FARM.

A. W. HARMAN, Jr., Treasurer State of Virginia, Prop. Richmond, Va.

We breed and ship the FINEST STRAINS of
Large ENGLISH BERKSHIRES

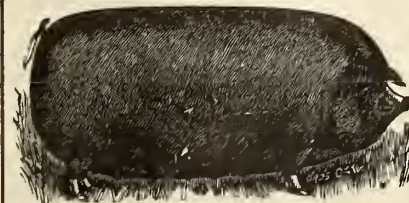
for less money than any firm in the South, quality considered. Every pig shipped possesses individual merit. Pedigree furnished with all stock. Kill or sell your scrubs and buy hogs that will pay. For prices and description, address
ALEX. HARMAN, Mgr., Lexington, Va.



TAMWORTH and POLAND CHINA

Pigs from registered stock, 8 weeks old, \$5.00. A few nice POLAND CHINA Boars ready for service, for \$10 to \$15.

J. C. GRAVES, Barboursville, Orange Co., Va.



POLAND CHINAS

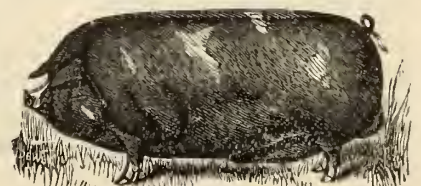
I have now for sale a fine lot of pigs, also boars ready for service, gilts and bred sows. I have in my herd hogs closely related to such hogs or Ideal Sunshine, Great Chief Tecumseh, Royal Racket and Anderson's Model. Also Shropshire sheep and Short Horn cattle. All stock guaranteed as represented or may be returned at my expense. Farmers prices.

J. F. DURREITE, Birdwood, Albemarle Co., Va.

Registered

Poland Chinas.

Some choice pigs, beauties of the best blood this country affords. Also some fine boars ready for service. Stock guaranteed as represented. Prices low for such quality of stock. W. M. JONES, Crofton, Va.



Richmond, Va. Report for July, 1904.

South Dakota Experiment Station, Brookings, So. Dak. Bulletin 84. Report of Investigations at the Highmore Station for 1903.

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Bulletin 87. The Western Sand Cherry.

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Government of the Philippines Islands. Department of Interior, Manila. Bureau of Agriculture. Maguey Cultivation in Mexico.

Imperial Department of Agriculture for the West Indies, Barbadoes. W. I. A, B, C of Cotton Planting.

THE FONTAINE SHOCK BINDER.

Farmers are beginning to think of corn harvest during this month. Unless all signs fail, the harvest will be about the largest that this section of the country has ever seen. It therefore behooves every one to take extra precautionary measures for the proper handling of the crop so as to save every particle of it. If this be done, there will not be such a shortage of long feed during next winter as was experienced by a large number of stockmen during the past winter. The first thing to do with the corn crop at cutting is to see that it is shocked properly. One of the best things to help shock corn is the Fontaine Shock Binder. One man can operate the little device, and we undertake to say that if a shock is tied at the proper height with this binder no wind short of a tornado will upset the shock, nor will any ordinary rainfall reach its interior. Look up the ad. and get two or three of these binders and try them.

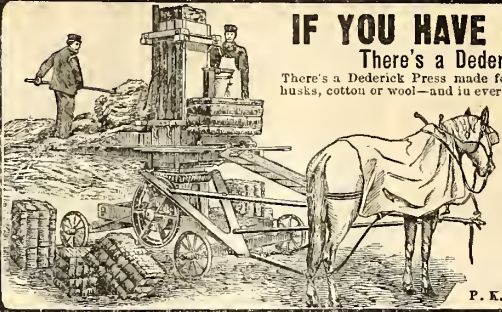
ROCKBRIDGE BATHS.

We are in receipt of a neat pamphlet setting forth the merits of this famous summer and winter resort, which is owned by our friend and subscriber, E. C. Carter, Esq., of New York city. The wealth and refinement of the continent have visited this famous hostelry and springs for generations. It is better equipped and more convenient of access, and consequently better patronized, than ever.

"Yes," said Henpeck, "the thing that impressed me most in Egypt was the mummy of one of the ancient queens."

"What was remarkable about it?"

"The fact that they could make her dry up and stay that way."



IF YOU HAVE ANYTHING TO BALE

There's a Dederick Press Made to Bale It

There's a Dederick Press made for every baling purpose—for hay, straw, moss, husks, cotton or wool—and in every style and size, in wood or steel, and from the smallest hand press to the largest and most powerful horse power or steam press. A press of moderate cost and maximum utility is

DERICK'S

"Always Ready"

always ready to operate—always ready to move. Simply unhitch from the truck pole and hitch to the sweep and it's ready for work. Reverse the operation and it's ready to move. Our illustrated catalogue describes all these different presses. It will pay you to send for a copy. It's free.

P. K. Dederick's Sons, 87 Tirol St., Albany, N. Y.

SPRING LITTERS.

We have now coming ready for shipment seven litters of

LARGE YORKSHIRE PIGS

All recent experiments place this breed in front, as the best and most profitable bacon hog. They will raise 40 per cent more pigs and they will grow faster and make more pork in a given time than any other breed.

Also BULLS, YOUNG COWS and HEIFERS from our great JERSEY COWS.

BOWMONT FARMS. Salem, Va.

We Are Still in the Business....

"HILL TOP" Stock at Shadwell, Va.

Having changed our residence, we brought with us and have for sale a choice lot of HILL TOP stock.

Southdown and Shropshire Sheep, Berkshire Hogs and B. B. R. Game Chickens.

Our Berkshire Pigs are now closely sold up, but we have a few left; will have a fine lot ready to ship by September 1st. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

H. A. S. HAMILTON & SONS, Shadwell, Va.

For Sale

10 Reg. Jersey Heifers and

10 Reg. Guernsey Heifers.

All due to calve this fall and winter.

Also several first-class GUERNSEY BULL CALVES, BERKSHIRE BOARS, SOWS and PIGS. Can furnish them not akin. Several first-class watch dogs, and also Fox Terrier Puppies. Can be inspected if days' notice is given.

M. B. ROWE & CO., Fredericksburg, Va.



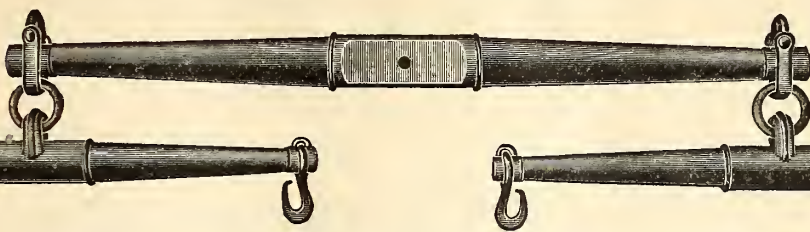
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Registered Herd—First Premium stock; largest and most prolific hog on record: 3 Sows 41 Pigs; breeding Stock 400 to 700 pounds; easy feeders and quickly developed. Sows, Boars and Pigs for sale. My time to this breed exclusively. Only strictly first class stock shipped.

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Send for our No. 8
Catalogue for 1904
Contains everything of
interest to Dealer or User
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PATTERN No. 105 EQUIPPED WITH FORGED TRIMMINGS.

Guaranteed not to break or bend. Furnished with rings or hooks for trace attachment. Sample orders sent to responsible parties on trial.

Pittsburg Tubular Steel Whiffletree Company, ^{SOLE} MANUFACTURERS Pittsburg, Pa.

MAGAZINES.

The September St. Nicholas brings interesting chapters in the two serials, Gensai Murai's "Kibun Daizin, or From Shark-Boy to Merchant Prince," the story of a Japanese boy for American lads, and Mary Constance Du Bois's charming tale for girls, "Elinor Arden, Royalist." The illustrations for these stories, by George Varian and W. Benda, are exceptionally good, even for St. Nicholas.

Hugh M. Smith tells interestingly of "Brittany, the Land of the Sardine." Lida Rose McCabe describes the adventures of "A Citizen of the Deep." "The Country Fair" is the account of how some girls and boys succeeded in carrying out a novel scheme. Julian King Colford's "American Memorials in London" tells and pictures facts every one should know. "A Goose Hunt by Steamer" is a jolly account of a jolly expedition, and Maria Brace Kimball describes entertainingly "The Children of Zuni." There are short stories by Caroline M. Fuller, "The Pursuit of the Calico Cat;" S. W. Hovey, "Nothing but a Girl;" Mabel Clare Craft, "The Killing of Storm."

The frontispiece of the September St. Nicholas is a full-page reproduction of the painting of Lady Betty Delme and her children, and the number is crammed with gay and pretty verse: "Peter Puff-and-Blow," "The Difference," "Thirteen," "Yours Severely," "The Holly-Tree Wight," "What's in a Name" "A Moonlight Effect," "The Gay Grecian Girl," "Which?" "Folliloo," "Tom's Return" and "The Enterprising Tapir." The departments, Nature and Science, the St. Nicholas League, Books and Reading, the Letter-Box and the Riddle-Box, are full of interest and profit, as always.

Francis Willing Wharton has a new novelette in the September number of Lippincott's Magazine, entitled "The Deep Waters of the Proud." This title is, we believe, taken from one of the Psalms of David, and the tale throughout excels in power and interest.

The half-dozen short stories of the month begin with an especially human one by Alden March, entitled "Help Wanted, Females." In it there is confusion of typewriters (of the fem-

FARMERS, READ THIS! GREAT HEREFORD OFFERING



My present offering of pure bred, Registered Herefords, consisting of BULLS, BULL CALVES, COWS and HEIFERS, is the best I ever had. If you want some really good cattle and cannot afford the outlay for the establishment of a herd of pure bred, do the next best thing and get a pure bred HEREFORD BULL to cross on your native cows. MARQUIS OF SALISBURY 25TH, by Imp. SALISBURY, and out of QUEEN LIL, is especially recommended for this very purpose. \$75 will get him. Calves by this Bull should fetch twice as much at 6 weeks old as a scrub calf; if kept for beef, they will be ready in one-third to

one-half less time; will weigh from 300 to 500 pounds more on the same feed; will bring a cent or two more per pound on the market. Two or three calves will pay for your bull. There is no exaggeration in this statement.

It is difficult and expensive to fully describe and price stock in an advertisement, so I suggest that you come to Castalia (will meet you at Keswick on notice), and personally examine my stock. You will be more than pleased. I have spent money unstintedly to get the best of the breed. This does not mean that I charge long prices. I positively do not. Write me what you want if you cannot come. Satisfaction guaranteed.

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Bacon Hall Farm.

Hereford Cattle :- Berkshire Hogs

REGISTERED—ALL AGES.

Toulouse Geese, Muscovy Ducks.

MOTTO: Satisfaction or no sale.

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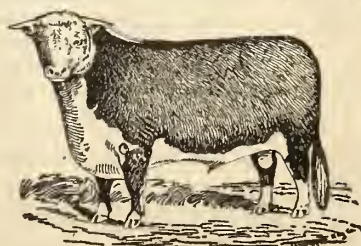
Registered Herefords,

Herd headed by the Grand Champion

PRINCE RUPERT, 79539.

Young stock for sale. Inquiries
cheerfully answered.

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all one cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable, stationary or traction. Mention this paper. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mrs. Meagher & 15th Sts., Chicago, THIS IS OUR FIFTY-FIRST YEAR.

UNTIL YOU INVESTIGATE
"THE MASTER WORKMAN,"
a two-cylinder gasoline engine superior to

inine gender) and a happy conclusion. Ina Breevoort Roberts, the popular author of "The Lifting of a Finger," contributes one of her fetching love-stories called "The Release." "Graduates of the School" is by Cyrus Townsend Brady and is an extraordinarily good tale of yellow journalism. Caroline Lockhart writes "Sharper Than a Serpent's Tooth," which is a story of Labrador and a thankless child. "At the Sign of the Waxen Woman," by Clinton Dangerfield, is a lively story of the pursuit of a bride and the outwitting of an unwelcome bridegroom. "The Regeneration of Isaiah" closes a series of amusing darky sketches by Ella Middleton Tybout, which have been running through the magazine for some months. These have attracted attention sufficient to demand their publication in more permanent form.

Following its "Western," "Fiction" and "Midsummer Holiday" numbers, the September number of The Century will likewise have a special character. It is called a "Round-the-World" number, and the name is justified by the geographical distribution of the text and pictures. Appropriate to this idea are two drawings by Castaigne, "The Flying Dutchman" and "The Wandering Jew," which are printed as frontispieces.

The opening article is the first illustrated account in English of the canonization of Saint Seraphim, the Russian popular saint, at Sarov last August, in which the Czar and Czarina took part. It is entitled "The Russian Lourdes."

Other articles, which can only be enumerated, are "Japan's Highest Volcano," an account of an ascent of it, by Herbert G. Ponting; "The Nelicator of Arctic Alaska," by Edward A. McIlhenny; "Hidden Egypt," recording the first visit by women to the Coptic monasteries of Egypt and Nitria, by Agnes Smith Lewis; "The Nail of the Universe," an account of the Emperor of Java and his court, by Ernst von Hesse-Wartegg; "Antarctic Experiences," by the explorer, C. E. Borchgrevink; "Round-the-World at the World's Fair," by Walter Williams, with pictures of a curious sort of exhibits or natives from Siam, the East Indies, Africa, Patagonia, China, Mexico, Japan, Spain, Greenland, and the Philippines. South Africa is represented by a sketch, "The Locusts of Natal," by Mark F. Wilcox; Spain by Cole's beautiful engraving of a painting by Velasquez, and France by Degas's "Portrait of a Lady," recently bought by Mrs. Gardner for her Boston collection.

The fiction has also a wide distribution of scene. "Corporal Sweeney, Deserter," by Ralph D. Paine, is a story of China; "The Alchemy of Illusion,"

HIGHLAND STOCK FARM. PURE-BRED STOCK A SPECIALTY.

SPECIAL PRICES for this month on

Shorthorn Cattle, POLAND CHINA PIGS, SCOTCH COLLIE PUPS.

All Stock Recorded. - - - Write for Prices.

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Witten's Mills, Tazewell Co., Va.

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CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

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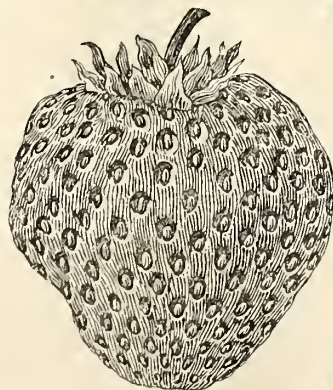


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You men in the early lamb business need Dorset blood. No lamb grows like a grade Dorset. Grade Dorset ewes will lamb in December.

One cross will bring results. Try a Dorset ram. Our fall lambs are beauties. Write us or come to see them.

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Choice stock of Fruit Trees in the country. All the large, Improved Peaches affording luscious fruit from May to November. All the superb apples and pears covering the whole year. Mammoth delicious plums, cherries, grapes, figs, strawberries, dewberries, blackberries, raspberries, gooseberries, currants, asparagus, rhubarb, etc., etc. Largest shippers of strawberry plants in the World.

All trees, etc., delivered FREE. 130 page manual telling how to grow all kinds of fruit. Free to buyers.

Write now for catalogue for fall planting. Mention this paper.

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...Strawberry Plants...

All the standard sorts, from earliest to latest, after Sept. 1st, at 50 cts. per 100, or \$3 per 1,000. Catalogue on application.

J. B. WATKINS & BRO., - Hallsboro, Virginia.



by Alice Brown Morrison, is a story of travel in Italy; the scene of this part of "The Sea-Wolf" is the Russian Pacific, while America is represented by Dr. Weir Mitchell's "Youth of Washington, Told in the Form of an Autobiography;" "The Great American Pie Co.," by Ellis Parker Butler, and another of Miriam Michelson's stories of the Nevada Madigans, entitled "A Merry, Merry Zingara." There is also an article on "Ballooning as a Sport," by George De Geofroy, illustrated by Andre Castaigne, the prospect being that before long there may be a club for ballooning in America as there now are similar clubs in Paris and Rome.

The poems are for the most part in keeping with the spirit of the number.

We have reserved to the last what is probably the most important article in the number, Professor Henry Fairfield Osborn's first paper in his group on "Fossil Wonders of the West." This paper is devoted to the dinosaurs of the Bone-Cabin Quarry in Wyoming, being a description of the greatest single find of fossils in the world, and of the scientific work which has been done there during the past few years. It will be in the nature of a revelation to the scientific world, and, like most of the other articles in the number, is fully illustrated.

The Review of Reviews, in the Presidential campaign, fills a place in magazine literature that no other publication attempts to fill. It is a complete and accurate record of all the strategic moves in the game of national and State politics. The July and August numbers dealt with the careers and personalities of the candidates; the September number treats of the plans and methods of the managers, the personnel of the national committees, and the actual work of the canvass. The complex situations in Missouri and Colorado, as well as the problems of national party organization in the opposing camps, are discussed editorially, while an illuminating article on Chairman Taggart and the Democratic committee organization is contributed by James P. Hornaday, with a similar study of Chairman Cortelyou and the Republican campaign plans by Albert Halstead. A unique addition to the literature of the campaign is the interesting summary of European press comment on President Roosevelt by Louis E. Van Norman, with reproductions of foreign cartoons. Elsewhere in the magazine appear many American cartoons depicting various phases of our great quadrennial battle for votes. But a good deal more than half of the September number is devoted to non-political topics. Herbert Croly writes about the effect on metropolitan interests of the opening of the New York rapid-transit subway next month; President Butler, of Columbia, sets forth the educational worth of the St. Louis world's fair, with especial reference to the great September congresses

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"When I reached Richmond, I inquired of several business men for the best Business College in the city, and, without exception, they all recommended Smithdeal's as the best"--W. E. ROSS, LAW STENOGRAPHER, Richmond. Bookkeeping, Shorthand, Writing, taught by mail.

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Being the Largest Depository for Banks between Baltimore and New Orleans, we offer superior facilities for direct and quick collections; accounts solicited.

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of science and art; M. C. Sullivan describes the remarkable achievements of the Japanese in battlefield communication, especially in the use of the field telephone and telegraph; a Japanese writer sketches General Kuroki; Chang Yow Tong gives a Chinaman's views on the "Yellow Peril"; Alvan F. Sanborn contributes an appreciation of "Two French Apostles of Courage in America,"—Charles Wagner, author of "The Simple Life," and Paul Adam,—both of whom are about to visit the United States; and there are interesting illustrated papers on land reclamation in California and Holland by A. J. Wells and Consul-General Frank D. Hill, respectively. The methods pursued by the General Education Board in obtaining information about Southern school conditions are summarized by W. H. Heck.

IN FLY TIME.

A wealthy Jew had decided to take a long-contemplated vacation. With an eye to business, he called his son to him ere his departure and instructed him carefully and in detail how he wished his affairs conducted during his absence.

"Now, Isaac," said he, "I want you to be very particular with the suits. I have regulated the price this way: Every dot on the price-mark means a dollar. Von dot means von dollar; two dots, two dollars; three dots, three dollars. Now, my boy, save the price-marks and take good care of the store, so your old father will be proud of you!"

And so the old Jew went away and stayed two weeks. Upon his return he sought his son eagerly.

"Vell, Isaac, and how has business been?"

"Very good, father. I've sold twenty-seven suits."

The aged Jew held up his hands in amazement. "Twenty-seven suits! Oh, Isaac, and how much money did you get?"

Isaac showed a 'prodigious sum. Again the old man lifted his arms. "Vat! all this money, and nobody come back!"

"No, father, nobody came back."

"Isaac, you have saved the tags? give them to me."

Slowly and critically he examined the bits of pasteboard. Then a great light illuminated his face.

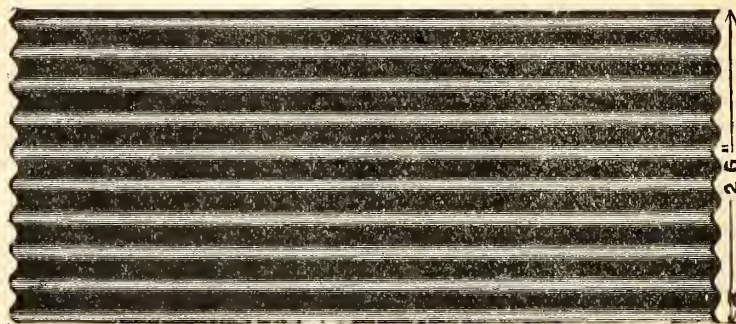
"Oh, Isaac!" he cried, "thank God for dose little flies!"—September Lippincott's.

RECENT SALES AT BACON HALL.

Messrs. E. M. Gillet & Son, proprietors of Bacon Hall farm, report the following recent sales: Hereford bull to Louis de La Croix, of North Carolina; Berkshire boar to the Maryland Experiment Station; Berkshire sow to W. S. Nelson, of Virginia; Muscovy ducks to L. K. Lynn, of Virginia; all of which were satisfactory.

ROOFING OF ALL KINDS.

Painted Corrugated Roofing, Painted V. Crimp Roofing, Roofing Tin in boxes or rolls, Tarred Roofing Felt, Perfected Granite Roofing.



Send us the DIMENSIONS OF YOUR ROOF, stating KIND OF ROOFING wanted, and we will quote you on sufficient quantity to cover it.

You can ADD YEARS to the life of your roof by painting it with our

Magnet Red Roofing Paint.

1 gallon will cover 2½ squares. Can furnish in any size package, 1 gallon up. Only the very HIGHEST GRADE material enters into the manufacture of this paint. Write for prices.

We also carry a complete stock of Conductor Pipe and Gutter, Solders and Metals; Galvanized and Black Sheet Iron, etc.

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Headquarters for GOLDENLAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❀ ❀ ❀

GOLDEN LAD'S SUCCESSOR. First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

SPECIALTY. Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



BILTMORE POULTRY YARDS.



SPECIALTY. Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

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The Imperial Fruit and Poultry Farm

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BARRED PLYMOUTH ROCKS, WHITE PLYMOUTH ROCKS,
SINGLE COMB WHITE AND S. C. BROWN LEGHORNS,
SILVER LACED AND WHITE WYANDOTTE,
MAMMOTH PEKIN DUCKS.

Satisfaction Guaranteed. Write your name and address plainly.

P. H. HEYDENREICH, Prop., : : : Staunton, Va.

A REMARKABLE NEW BOOK.

Alfalfa. Lucerne, Spanish Trefoil. Chilian Clover, French Clover, Medic, Purple Medic (*Medicago sativa*.) Practical information on its production, qualities, worth and uses, especially in the United States and Canada. By F. D. Coburn, Secretary Kansas State Board of Agriculture. Illustrated. 12mo, 160 pp., cloth. Orange Judd Co., New York. Price, postpaid, 50 cents.

Secretary F. D. Coburn, of the Kansas Board of Agriculture, who has been very actively and helpfully identified as an official with the development of this and several of the more recent valuable agricultural plants, has in this practical treatise presented all the best that is known up to the present time on the growth, uses and feeding value of alfalfa, thoroughly discussing the subjects in all their bearings, in language so plain as to be clearly understood even by those who were before entirely unfamiliar with this remarkable plant. Although in the main treating the matter in a general way, it is dealt with as well from the standpoint of each State where it has been experimented with, and gives the observations of both farmers and scientists there who have paid it closest attention. No such fund of fact and experience has before been made available to the public upon this subject, which is sure to be of interest to every farmer in the country. Mr. Coburn's handbook is so complete and so excellent that no one who has not studied it can claim to be well informed about alfalfa and its significance in improved farm and animal husbandry. We can supply the book at the published price.

ABSENT-MINDED.

An old gentleman who was very absent-minded often had to ring for his servant and say:

"James, I am looking for something, and now I can't remember what it is."

And then James would suggest:

"Your purse, sir, or spectacles or check-book?" and so on, until the old gentleman would say at last:

"Of course, that's it. Thank you, James."

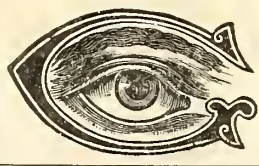
One night the old gentleman had gone to his room and all were in bed when James was startled by hearing his master's bedroom bell. He rushed upstairs and threw open the door.

"James," said the old gentleman, "I came up here for something, and now can't remember what it was."

"Wasn't it to go to bed, sir?"

"Of course," said the old gentleman, "so it was. Thank you, James."—August Lippincott's.

The National Nut Growers' Association. The third annual Convention will be held at St. Louis, Mo., October 26 to 28, 1904. Information can be had from J. F. Wilson, Secretary, Ponlan, Ga.



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Why don't you kill ticks on your cattle and sheep, lice on all animals, by dipping or washing the animals with a first-class, non-

poisonous tar carbolic creosote dip? And when you purchase, save 20 to 25 per cent. in price by ordering MINOR'S FLUID of—

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Insurance Company, of Richmond, Va.
Insures Against Fire and Lightning.

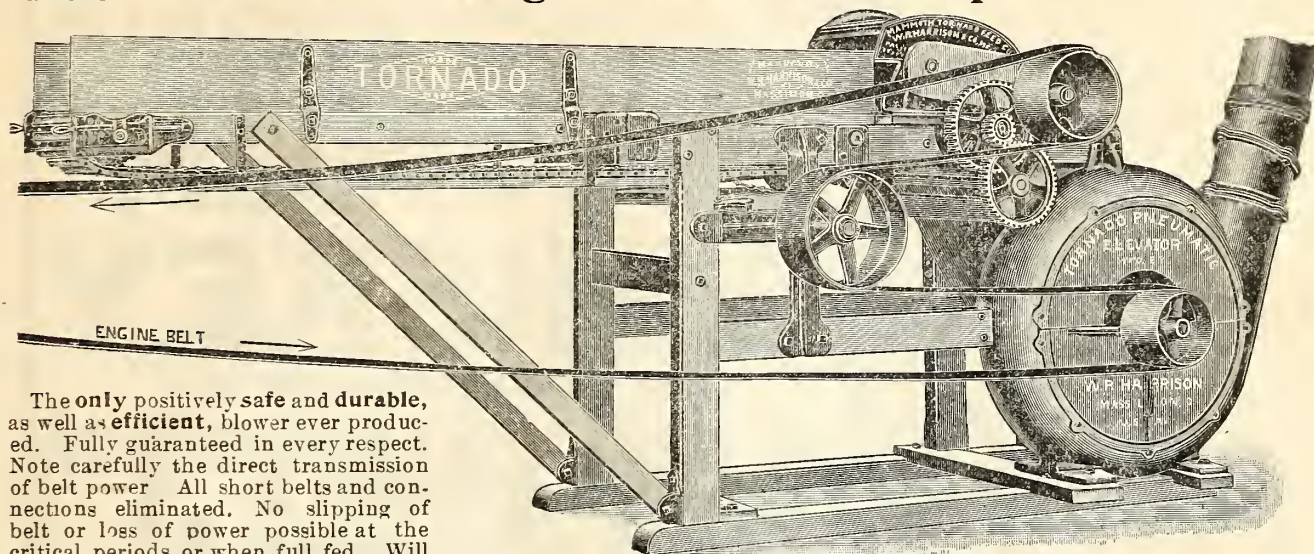
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The **only** positively **safe** and **durable**, as well as **efficient**, blower ever produced. Fully guaranteed in every respect. Note carefully the direct transmission of belt power. All short belts and connections eliminated. No slipping of belt or loss of power possible at the critical periods or when full fed. Will **successfully** and **satisfactorily** elevate to any reasonable height, and do it with the **least** power of any on the market.

Catalogue and information free for the asking. Ask for it

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AGRICULTURAL EDUCATION.

A Return to the Soil.

The little red brick school-house of the earlier days of the settlement of the Mississippi Valley States was the principal factor in the elevation of our great middle class which made of the American nation a people of intelligent thinkers, ready and able in time of crisis to decide right and to do. Higher education has followed and new systems and methods have supplanted the "Hoosier Schoolmaster" and the birch rod, identified with the little red school-house. The educational level of the country has undoubtedly risen many degrees, but with this advance have come problems more perplexing than those which troubled the pedagogues of our fathers. The trend of the country raised boy is all too irresistibly toward the city, while there is no countervailing current impelling the young people of the cities to fill his place in the country. The problem is one for the most serious consideration of our best statesmen, this constant and centripetal movement which is overcrowding our centres of industry, where men work for day wages, and which is steadily drawing from our rural communities where men own the land they live upon and get their sustenance from the soil.

TO STEM THE DRIFT.

Yet there are quiet forces at work, year by year becoming better organized and of broader power, whose tendency is to overcome this hurtful condition and induce a migration back to the land and away from the overcrowded centers. Industrial and agricultural educations are playing an important part, and nature study courses

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7 10,000 Gallon Tanks and Towers,
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All to be installed in
thirty days on the old
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**FINE GOLD AND DIAMOND JEWELRY.
STERLING SILVERWARE AND CUT GLASS.**

SIX SOLID STERLING SILVER TEA SPOONS, \$3.30. Write for our catalogue; it contains many articles on which we can save you money.

C. LUMSDEN & SON, Established 1835, 731 East Main Street, Richmond, Va.

and city school gardens where children are taught to know something of the soil and plants and the real wonders of nature working around us at every hand, are no longer looked upon as fads. An interesting move in this direction was made the other day in the organization of the American League for Industrial Education in Chicago, with such national characters for officers and sponsors as N. O. Nelson, of St. Louis, who has founded the village and school of Le Claire, adjacent to his factories at Edwardsville, Ill.; Thomas Kane, president of the Winona Assembly, which is establishing an institution for the teaching of agriculture in Indianapolis; J. H. Krauskopf, founder and president of the now noted National Farm School at Doylestown, Penn.; John H. Patterson, president of the National Cash Register Co., whose school gardens and model factory equipments at Dayton, O., have awakened a widespread interest; Gen. R. S. Tuthill, through whose efforts the St. Charles Home for Boys at Chicago was founded; O. J. Kern, superintendent of schools for Winnebago county, Ill., who has done a great work in the consolidation of county schools, and perfected plans for engraving on them methods for the practical teaching of improved agriculture in experimental gardens; E. B. Butler, president of the board of trustees of the Illinois Manual Training School Farm; and Milton George, the founder of that school; Jane Addams, head resident of the Chicago Hull House Social Settlement, and others of note in this movement.

TEACH THE EIGNITY OF WORK.

The League is working for an industrial public school system, which will include the teaching of domestic science and both agricultural and manual training in all the public schools, so that children shall be taught to work with their hands and farm as they are taught in the public schools of France and Denmark. It maintains that every school should have a school garden, where every child should be taught to be a lover of nature and of the country, and trained toward the land as a source of honorable livelihood, rather than away from it.

Such a system of education would undoubtedly tend to very largely check the constant movement toward the cities. The farm boy who receives a fair school or high school education naturally turns toward the place where he can best apply it. His training has not been such as would help him to farm better or make of farming an interesting science. And so he goes to the city. On the other hand, the city boy, as he grows up and marries would like to have a home of his own on the land, but he knows only the trade he has learned. He knows nothing of farming, and he would not know what to do on a piece of land if he had it. It has been often said that

Direct from our distillery to YOU
Saves Dealers' Profits! Prevents Adulteration!

HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

4 FULL QUARTS \$3.20
EXPRESS CHARGES PAID BY US

OUR OFFER We will ship you, express prepaid, four full quarts of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20. Try it and if you don't find it all right and as good as you can get from anybody else at any price, send it back at our expense and your \$3.20 will be promptly refunded. That's fair, isn't it? Bear in mind this offer is backed by a company with a capital of \$500,000.00 paid in full and the proud reputation of 36 years of continuous success. We are regularly supplying over a quarter of a million satisfied customers, convincing evidence that our whiskey pleases, and that we do just as we say. You run absolutely no risk in accepting our offer, for you get your money back if you are not satisfied with the whiskey after trying it. We ship in a plain, sealed case; no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Oregon, Utah, Wash. or Wyo., must be on the basis of 4 QUARTS for \$4.00 by EXPRESS PREPAID or 20 QUARTS for \$16.00 by FREIGHT PREPAID.

Every quart of whiskey we sell is made at our own distillery, and our entire product is sold direct to consumers, saving you the dealers' big profits and avoiding all chance of adulteration. No matter how much you pay you cannot get anything purer or better than HAYNER WHISKEY and yet it costs only \$3.20 for four full quarts and we pay the express charges. Satisfaction guaranteed or money refunded by first mail. Distillery, Troy, Ohio. Established 1866.

149

WRITE NEAREST OFFICE.

THE HAYNER DISTILLING COMPANY

ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.



THE SEABOARD AIR LINE RAILWAY

OFFERS
PROFITABLE
INVESTMENTS

THE MANUFACTURER,
THE STOCK RAISER,
THE DAIRYMAN,
THE FRUIT GROWER,
THE TRUCKER.

TO

WHERE YOUR LABOR IS NOT IN VAIN.

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE,
Gen. Industrial Agt., Portsmouth, Va.

EDW. W. COST,
Traffic Mgr.

CHARLES B. RYAN,
Gen. Pass. Agt., Portsmouth, Va.

The Only Complete Drill.

Hoe, Disc or Shoe Fertilizer And Plain Drills.

America's 20th Century Line.

FETZER & CO.,

Capital, \$1,000,000.

Middletown, Ohio, U. S. A.

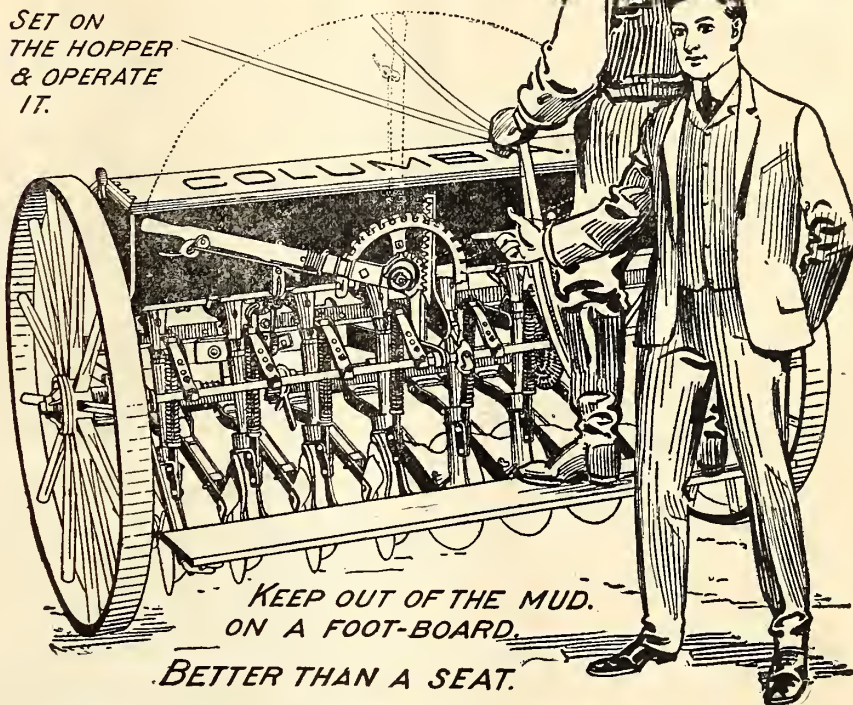
Factory established 1858.

Write for Booklet S.

**ALWAYS
SO CONVENIENT.**
(PATENTED)

**LONGITUDINAL LEVER OUT OF
THE WAY.**

SET ON
THE HOPPER
& OPERATE
IT.



**KEEP OUT OF THE MUD.
ON A FOOT-BOARD.**

BETTER THAN A SEAT.

it is useless to put the poor of the great cities out in the country because they will not stay there. They cannot be expected to, for to them it is a strange and barren story. The experience of the Salvation Army, however, found in its many irrigated colonies, shows that men will go out from the cities and live on the land and make good citizens where they are taught what to with the land after they get on it.

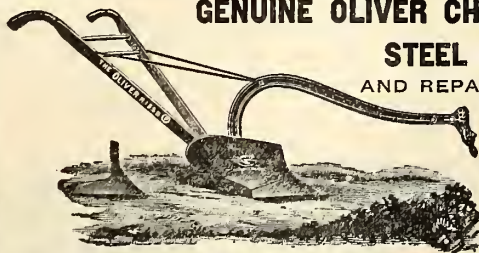
The irrigated farms of the West show the great capacity of land when well and intensively farmed, and that men can live in plenty and comfort on five acres and even on a single acre. Suppose that the 75,000 recently discharged employees of the Pennsylvania Railroad each had a highly cultivated acre of rich land to which he could turn his attention. Instead of being a drag on the community and the country, instead of having stopped producers, and would still be able to at least get a living from the soil. Does not this instance of the disemployment of 75,000 men who might, if they owned each an acre, be getting a living from the soil, supply food for thought to the man who is pondering over economic problems? GUY E. MITCHELL.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

GENUINE OLIVER CHILLED STEEL BEAM

PLOWS

AND REPAIRS.



This far-famed and world-renowned Plow we guarantee you is worthy of all that is said in praise of it. Wood Beam also furnished. Write for large Illustrated Catalogue.

We are general distributors of the GENUINE ONLY.

Farm Tools and Supplies

Large Illustrated Catalogue for 1904 just issued, embracing Hand, Horse and Power Labor-Saving Implements.

You must save as well as make money.

Write for this FREE catalogue at once.

NORFOLK FARM SUPPLY CO.

Implements
Poultry Supplies

Fertilizers
Wheel Material

41 to 51 Union Street,

NORFOLK, VA.

INCUBATORS AND BROODERS.



Season is at hand. HEN PRODUCTS higher than ever. Our prices low. Write for Free Catalogue.

When corresponding with our advertisers always mention the SOUTHERN PLANTER.

Our Clubbing List.

The following list of papers and periodicals are the most popular ones in this section. We can **SAVE YOU MONEY** on whatever journal you wish:

DAILIES.

	Price Alone.	With Planter.
Times-Dispatch, Richmond, Va.....	\$5 00	\$5 00
The Post, Washington, D. C.....	6 00	6 00
The Sun, Baltimore, Md.....	3 00	3 40
Chicago Live Stock World.....	4 00	3 50
News-Leader, Richmond, Va.....	3 00	3 00

TRI-WEEKLY.

The World (thrice-a-week), N. Y....	1 00	1 25
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WEEKLIES.

Harper's Weekly	4 00	4 00
Montgomery Advertiser	1 00	1 00
Nashville American	50	75
Breeder's Gazette	2 00	1 75
Hoard's Dairyman	1 00	1 35
Country Gentleman	1 50	1 75
Religious Herald, Richmond, Va....	2 00	2 25
Times-Dispatch, Richmond, Va.....	1 00	1 25
Central Presbyterian, " ".....	2 00	2 25
Horseman	3 00	3 00

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Wool Markets and Sheep	50	75
Dairy and Creamery	50	75
Commercial Poultry	50	75
All three	1 50	1 15
North American Review	5 00	5 00
The Century Magazine	4 00	4 25
St. Nicholas Magazine	3 00	3 25
Lippincott's Magazine	2 50	2 50
Harper's Magazine	4 00	4 00
Harper's Bazaar	1 00	1 40
Scribner's Magazine	3 00	3 25
Frank Leslie's Magazine	1 00	1 35
Cosmopolitan Magazine	1 00	1 35
Everybody's Magazine	1 00	1 35
Munsey Magazine	1 00	1 35
Strand Magazine	1 25	1 65
McClure's Magazine	1 00	1 35
Argosy Magazine	1 00	1 35
Review of Reviews	2 50	2 75
Poultry Success	1 00	75
Rural Mechanics	1 00	55
Blooded Stock	50	60
Successful Farming	1 00	75
Southern Fruit Grower	50	85

Where you desire to subscribe to two or more of the publications named, you can arrive at the net subscription price by deducting 50 cents from "our price with the PLANTER." If you desire to subscribe to any other publications not listed here, write us and we will cheerfully quote clubbing or net subscription rates.

Subscribers whose time does not expire until later can take advantage of our club rates, and have their subscription advanced one year from date of expiration of their subscription to either the PLANTER or any of the other publications mentioned.

Don't hesitate to write us for any information desired; we will cheerfully answer any correspondence.

We furnish **NO SAMPLE COPIES** of other periodicals.

Seed House of the South.

RED CLOVER,
HAMMOTH CLOVER,
CRIMSON CLOVER,
WHITE CLOVER,
LUCERNE CLOVER,
ALSYKE CLOVER,
BOKHARA CLOVER,
JAPAN CLOVER,
BUR CLOVER,



TIMOTHY,
ORCHARD GRASS,
RED TOP or HERDS GRASS,
KENTUCKY BLUE GRASS,
RANDALL GRASS,
TALL MEADOW OAT GRASS,
JOHNSON GRASS,
GERMAN MILLET,
BUCKWHEAT,
OATS and
CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable **FIELD AND GARDEN SEEDS** of every variety at **Lowest Market rates**, included in which are

RAGLAND'S PEDIGREE TOBACCO SEEDS.

WE ALSO SELL

Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

Wm. A. Miller & Son,

1016 Main Street,
LYNCHBURG, VA.

Headquarters for Nursery Stock.

WHOLESALE
AND
RETAIL.

We make a specialty of handling dealers' orders

ALL STOCK TRUE TO NAME.

Apples,	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts,	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

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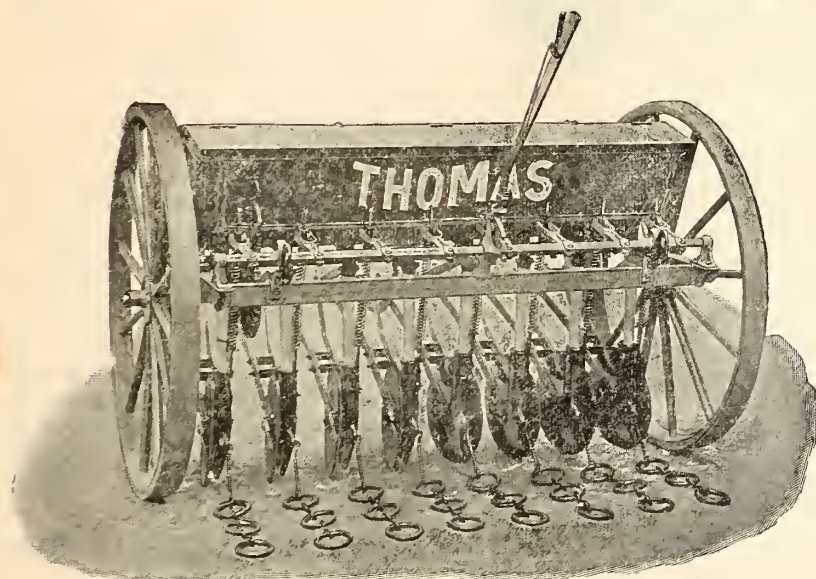
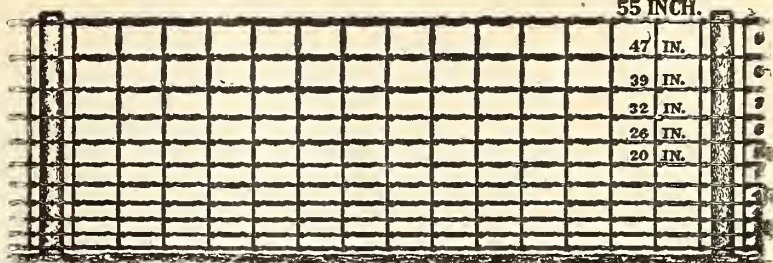
AGENTS WANTED.

FRANKLIN DAVIS NURSERY CO., Baltimore, Md.

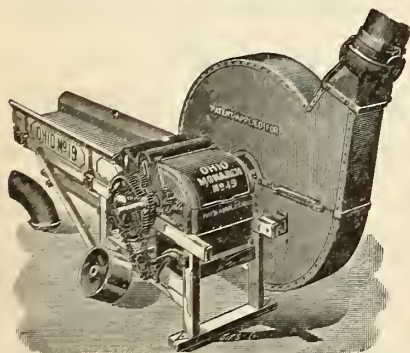
The American Field Fence

is even less than barb wire or wood and when erected is practically everlasting. Furnished in various heights and styles.

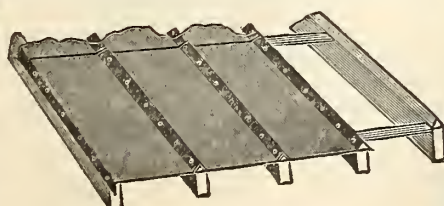
Write for special catalogue and prices.



THE THOMAS DISC GRAIN DRILL will drill perfectly WHEAT, OATS, CORN, PEAS AND BEANS as well as grass seed of all kinds. With or without fertilizer attachment.



OHIO FEED CUTTERS for hand or power. A comparison with others will convince you it is the strongest, simplest and best made. The power machines are furnished with blower or carrier if so wanted. Prices very low.



V CRIMP STEEL ROOFING. The most economical roof made. Does not require a carpenter to put it on. Furnished in all lengths from 5 to 10 feet long.



WOOD'S PATENT SWING CHURN. The quickest and cleanest butter maker known. The frame is made of Hollow Steel Pipe, very light and strong, and easily forms a useful table. The churns are furnished of either wood or heavy tin.



THE EMPIRE CREAM SEPARATOR should be on every farm where three or more cows are kept. It will save its cost many times in one year. It is the simplest one ever manufactured and can be cleaned without trouble to any one. Write us for particulars.

SINGLE AND DOUBLE CIDER MILLS. All sizes and capacities at low prices.

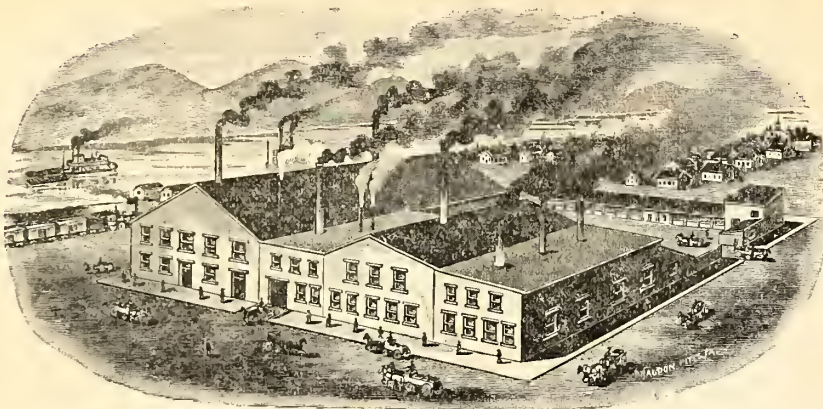
BIRDSSELL STEEL SKEIN FARM WAGONS, MITCHELL FARM WAGONS, BUGGIES, CARRIAGES, HARNESS, ROBES, BARB AND PLAIN WIRE, POULTRY NETTING AND LAWN FENCING, CORN SHELLERS, FEED CUTTERS, GRAIN DRILLS, WOOD SAWS, MOWERS, BINDERS, HAY RAKES.

All kinds of Agricultural Implements and Machines.

Catalogue mailed free.

THE IMPLEMENT CO., 1302 and 1304 E. Main St., Richmond, Va.

EVERLASTING DOUBLETREES AND SINGLETREES.



We present herewith an illustration of the factory of the Pittsburgh Tubular Steel Whiffletree Co., in which are made the celebrated tubular steel doubletrees, singletrees and neck yokes of every description. These articles are made from steel tubes, which are tapered and flattened, which process gives them a graceful appearance as well as adds to their already great strength. Trimmings are all drop forged and are so arranged that any blacksmith can make repairs, when necessary. These goods are used extensively on the farms and plantations in almost every country, including far-off Australia, Mexico, Hawaii, Philippines and many others, and all users are unanimous in their praise of the great merits of the Tubular Steel Whiffletrees. The manufacturers guarantee them to excel all other makes in the three essential points of strength, durability and construction. The following guarantee goes with every set of these articles which leaves the factory:

The Tubular Steel Doubletree is proven to be superior to any other form of construction, not excepting sheet steel, solid steel, malleable iron, or the best hickory grown. They are head and shoulders ahead of any other whiffletree on the market to-day, and are entitled to this position on the possession of the following recognized merits, not possessed by other makes:

First. The necessary draft strength.

Second. The necessary lifting strength.

Third. The only absolutely safe trimmings, which are guaranteed to remain permanent in all climates and under all conditions, it having been demonstrated by actual service in the damp and sultry climate of Cuba during the late war with Spain, when the United States Government equipped 5,000 of the army wagons with our farm wagon doubletrees, pattern No. 102, and the goods were found to be so satisfactory that the officer in charge there made them the subject of a special report.

All dealers and users are requested to send for illustrated catalogues showing a full line of these articles for all purposes from the hauling of the heaviest machinery to the lightest plowing and harrowing.

To those going to the Exposition at St. Louis, don't fail to examine the creditable exhibit of this company, which is in the Transportation Building.

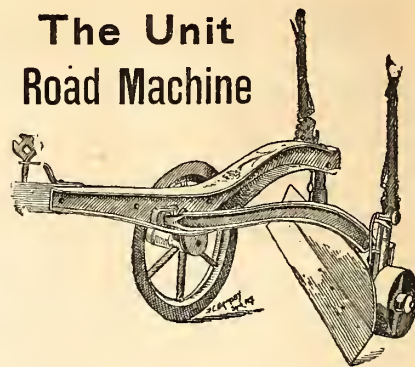


Farm Wagon and Overland Freight Wagon Doubletrees, equipped with Forged Fittings. Furnished with Hooks or Rings for trace attachment.

Just a final word. The manufacturers are so impressed with the superior qualities of the Tubular Steel Singletrees that they desire all users to have the benefit of this invention, which will save time and money. Address the Pittsburgh Tubular Steel Whiffletree Co., Pittsburgh, Pa.

When corresponding with our advertisers always mention the
SOUTHERN PLANTER.

The Unit Road Machine



So called because it has but ONE WHEEL, and take but ONE TEAM and ONE MAN to operate it.

Is of light draft, is sold at a low price, and will work roads faster than any other machine. Both ends of the mould board are under control of the driver. Being short it can be easily turned round in narrow roads to trim up short sections. IT IS A PERFECT RUT SCRAPER. The angle of the blade causes it to cut the ruts to best advantage, sweeping the loosened earth sidewise to fill them and moving the surplus to the centre of the road.

Roads can be kept in good condition, after constructed, at very little expense.

EVERY DISTRICT SHOULD HAVE ONE.

Write for circular.

THE CALL WATT CO.

13 S. 15 St. bet. Main and Cary, Richmond, Va.

**The RICHMOND FREDERICKSBURG.
and POTOMAC R. R.
and WASHINGTON SOUTHERN R'Y**

THE RICHMOND-WASHINGTON
LINE.

The Link Connecting the

Atlantic Coast Line R. R.,
Baltimore and Ohio R. R.,
Chesapeake and Ohio R'y.
Pennsylvania R. R.,
Seaboard Air Line R'y
and Southern R'y.

Between all Points via Richmond, Va.

Fast Mail, Passenger, Express and Freight Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo, and all points North, South, East and West.

W. D. DUKE, C. W. CULP,
General Manager. Asst. Gen'l Man.
W. P. TAYLOR, Traffic Manager.



....LAIDLAW'S....

Concentrated Tobacco Powder, Sheep Dip and Cattle Wash.

A SURE CURE FOR THE EXTERMINATION OF

Scab and Tick in Sheep. Lice on Horses and Cattle.
Lice on Hogs. Mange on Dogs.

Kills all vermin. Allays all irritation. Promotes growth of wool. Makes animal feel well and take on flesh.
ABSOLUTELY NON-POISONOUS.

PRICES: 5-lb. bag, 75c.; 10-lb. bag, \$1.25; 25-lb. bag, \$2.60; 50-lb. bag, \$5.00.

One 50-lb. bag makes 500 gallons Dip for Scab, and 1000 gallons for Tick, etc.

SOLE MANUFACTURERS,

LAIDLAW, MACKILL & CO., Limited, Richmond, Va., U. S. A.

To be Had at all Leading Drug Stores.

DEATH OF DR. REYNOLDS.

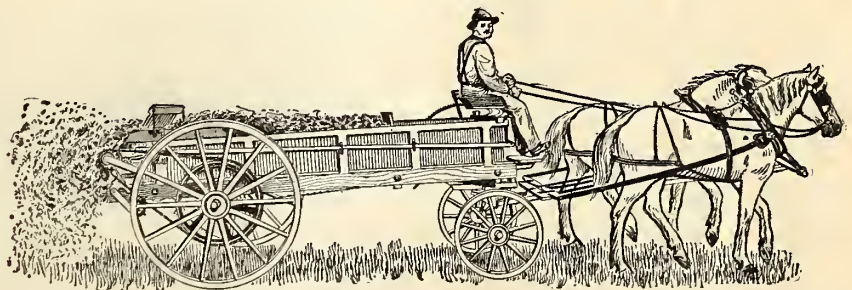
We are pained to have to record the death of Dr. James Henry Reynolds, of Adrian, Mich., who for a number of years was advertising manager of the Page Woven Wire Fence Company of that place. Our business intercourse with this gentleman was always of the friendliest and most satisfactory character. We always found him fair and square, upright and honorable, courteous and friendly. We tender his family and his late employers our profoundest sympathy in their bereavement.

THE TORNADO ENSILAGE CUTTER

We have pleasure in calling the attention of our readers to the advertisement of Messrs. W. R. Harrison & Co., Massillon, Ohio, to be found on another page. This firm makes one of the very best ensilage cutters on the markets. Our farmers will never be able to handle their tremendous corn crop without an ensilage cutter, and they will do well to investigate the merits of this one before purchasing.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

THE KEMP "SUCCESS" MANURE SPREADER.



The Kemp & Burpee Manufacturing Company were the pioneers in introducing manure spreaders, and have remained in the lead from the first. The Kemp & Burpee Manure Spreaders have always been the standard machines. Now they have taken a long step forward, and offer the farming public their newest spreader, which they have named "Success"; and it is well named, for it is so immensely superior in every way to anything ever before offered that it has proven to be a success among farmers. It is lighter in draft than the old machines, handles manure of all kinds and fertilizers with perfect ease and accuracy, and may be so arranged as to spread a given quantity of manure with evenness and exactness—wet, strawy manure, light strawy manure, manure tramped in the feed lot by cattle, fresh stable manure, sheep manure, cornstalk, corn cobs, ashes, lime, salt, commercial fertilizers, or anything else that is used for fertilizing purposes, no matter what it is. It has attachments for distributing commercial fertilizers on drills in the rows in any quantity per acre.

I will pay any one needing a manure spreader—and every farmer needs one, unless already supplied—to send for the catalogue of this company and give it a careful reading. It is sent free to all inquirers. Address Kemp & Burpee Manufacturing Company, Syracuse, N. Y.

When corresponding with our advertisers always mention the
Southern Planter.

Established by
GEO. WATT, 1840.

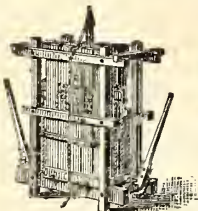
THE CALL-WATT CO.,

Implements, Machinery and Vehicles.

MANFRED CALL,
Gen'l. Manager.

HAND PRESS

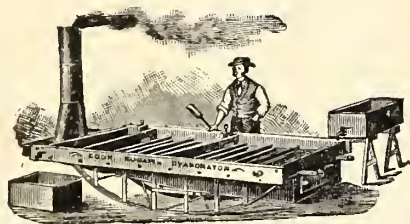
For Hay,
Cotton,
Straw,
Shucks,
etc., etc.



FULL CIRCLE BALING PRESS.



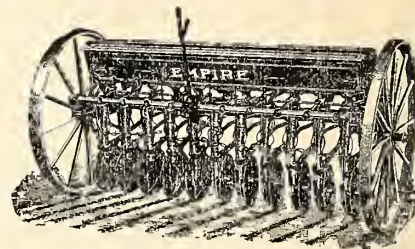
BOY BALING PRESS.



PORTABLE EVAPORATOR,
With Copper or Galvanized Steel Pans.



THREE-ROLL CANE MILL.



DISC AND HOE GRAIN AND FER-
TILIZER DRILLS,
Broadcast Plaster and Fertilizer Distrib-
utors.

Disc Harrows, Field Rollers, Manure Spreaders, Pea Hullers, Farm Wagons (all sizes), Engines, Saw Mills, Grinding Mills, Plows and Plow Repairs of all kinds, Corn Shellers, Wheat Fans.

We solicit enquiries for anything desired.

13 S. 15th Street, Bel. Main and Cary **RICHMOND, VA.**

CATALOGUES.

The Virginia Land Agency, Rich-
mond, Va., Hockaday Casselman & Co.,
Main street, Richmond, Va.

The Foos Mfg. Co., Springfield, O.,
Grinding Mills, Corn Harvesters, Corn
Shellers and Farm Tools.

The American Devon Cattle Club.
Year Book for 1904. L. P. Sisson,
Secretary, Newark, O.

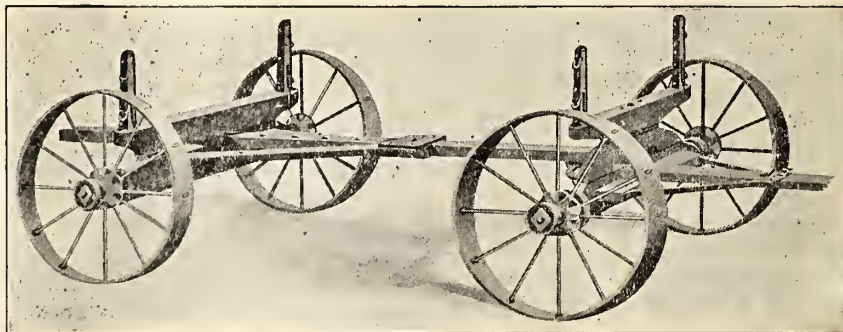
E. R. Taylor, Penn Yan, N. Y., manu-
facturer of Carbon Bisulphide for de-
stroying insects in grain, etc.

KEEP FLIES OFF STOCK.

Milch cows suffer more from attacks
of flies and mosquitoes in summer-
time than other animals, and the flow
of milk is often seriously impeded in
consequence. An occasional spray of
Sanford's Fly Knocker keeps off the
flies and biting insects and allows the
animals to feed in comfort. The ex-
pense is very small, while the gain is
great. F. S. Burch & Co., Chicago, can
supply you.

NOW I LAY ME.

Oh, once upon a time there was
A tiny little tot
Who knew her Mother Goose-y, though
Her prayers she quite forgot!
She started off, "I lay me down"
Then what do you suppose?—
"Down came a blackbird,
And nipped off her nose!"
—September Lippincott's.



AFTER HARVEST WORK.

There is the hauling out and spreading of the season's accumulation of
manure; the clearing of the wood lot; the removal of stumps, boulders, stones,
etc.; the repairing of farm and pasture fences and the filling of silos. Then,
too, there is the shelling and marketing of last season's corn, which has been
held until the present crop has given evidence of success. The marketing of
the spring and summer fed hogs, etc.

Every one of these operations brings the farm wagon into frequent and al-
most continued use. It is important, then, that the farm wagon be a good one.
It should be as light as is consistent with requisite strength. It should be low
down so that it may be easy to load. It should have broad faced tires in order
to avoid cutting up and "rutting" of meadows, pastures and farm lands, and to
reduce the traction and draft to the minimum.

These good qualities and advantages in a farm wagon are embodied in a
high degree in the Electric Handy Wagon, a cut of which is shown with this
article. As its name indicates, it is a low down, handy wagon in every sense
to which this term will apply. It is very easy to load, saving, we think it safe
to say, more than half the lift, as it is the part of the lift above the centre of
gravity—the last half—which requires the heavy strain. This advantage will
be appreciated almost beyond comparison in hauling all the above mentioned
substances. Write to Electric Wheel Co., Quincy, Ill., for free catalogue.

FOR **WHEAT, OATS, CLOVER** **AND OTHER GRASSES, USE** **LEE'S PREPARED AGRICULTURAL LIME.**

It is the "Old Reliable" and has stood the test for 25 years. It is composed principally of Hydrate of Lime Sulphate of Lime and Potash.

SPECIAL WHEAT FERTILIZER . . . We put this brand on the markets only a few years ago and its success has been short of marvelous. Some of the best farmers tell us that they get a better stand and growth of grass and clover from it than any other fertilizer. Recommended for corn land or any other land of fair fertility.

PLAIN SHELL LIME Constantly on hand at lowest prices.

No. 1. WOOD BURNT LIME, in car lots at lowest market price from the kilns.

If you wish to **IMPROVE** your land, use a ton of **PREPARED LIME** to four acres for **WHEAT** and **CLOVER**, or if you wish to seed it for other **GRASSES** where the land is in good condition, use the same quantity and it will give you a good **STAND** and **GROWTH** of **GRASS**. For reclaiming **POOR** land, where there is little or no **VEGETATION**, **COVER** naked place with litter from the barnyard or forest using the same quantity, and sow winter **OATS** and **CLOVER**,

SEND FOR CIRCULAR AND PRICES.

A. S. LEE & SON,

102 South 13th Street - - - - - Richmond, Virginia.

THE GREAT WESTERN MANURE SPREADER.

It is his duty to himself for a farmer to use modern, up-to-date machinery in his work. Otherwise he works at a disadvantage compared with his neighbors. It is in this light that we present the subject illustrated here, the Great Western Endless Apron Manure Spreader. This machine ought to be considered one of the most necessary and most important on the farm. It solves the problem of maintaining the land's fertility, and this means everything to him who is going to get prosperity out of the land. The old way of spreading manure will not answer now. It did not make the most, not even half value, out of the manure. It was slow, laborious, disagreeable work. The work was not done at proper times. The same amount of manure did not cover half the ground it can be made to cover with the Great Western, and yet the results on the first crop and succeeding crops are more apparent.

Of the perfect working and perfect adaptation of this machine to its special work we have spoken above. We will not at this time go into detail again on the matter. It must be remarked, however, that, while called a manure spreader, it is equally adapted to the right distribution of every character of farm fertilizer. A faint

idea of the distinguishing features of this great machine may be gathered from their advertisement. It should be read and each claim noted by every farmer who does not possess a manure spreader. These are the unquestioned essentials of the perfect working machine. A much better idea can be gathered from the Great Western Catalogue, a comprehensive book, which may be had simply by addressing the manufacturers, the Smith Manure Spreader Company, No. 18 South Clinton street, Chicago. It lays before the reader in a most convincing way the advantages of spreading manure by machinery, and shows fully and fairly the comparative merits of the Great Western.

Marshall P. Wilder is reported to be responsible for this:

A jovial Irishman of County Down, Ireland, was overfond of the cup that cheers, and also had a liking for the public house, where he was in regular attendance. His wife, wishing to wean him from his bad habits, decided to put up a job on him, and called in her brother Mike to help her. Mike was to waylay Terence on the way home from the spree, pretend to be a ghost, and deliver a severe reprimand. Everything went along swimmingly and Terence was slowly but noisily

nearing home when a ghostly apparition rose quietly before him.

"Hello there!" cried Terence. "An' phat are you?"

"I'm auld Nick," came grimly from the apparition.

"Sure, an' I'm mighty plazed t' mate yer," said the jovial Terence. "Coom out an' gie us a shake of yer hand. I'm married to a sister of yours."

NO PAY, NO CURE.

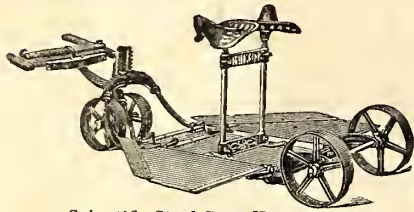
"Mister," said a little child to the herb doctor, or "root doctor," as they are sometimes called in some parts—"Mister, mamma says them las' pills you sold her didn't do no good, and she told me to ask you to send her some other kind this time," and, saying which, she placed the empty box on the doctor's rickety desk.

"Lemme see," said the doctor, as he adjusted his glasses and looked over his book. After inspecting the book for a few moments he looked up and said:

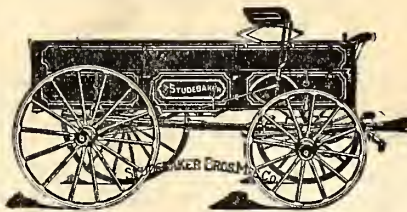
"Humph, humph! I see whar de trouble is. You tell you' mammy, honey, dat she nevah paid fur dem las' pills she got, an' tell her she can't spec' fur dem to do her no good 'cep'n dey's paid fur!"—September Lippincott's.

Mention THE SOUTHERN PLANTER when corresponding with advertisers.

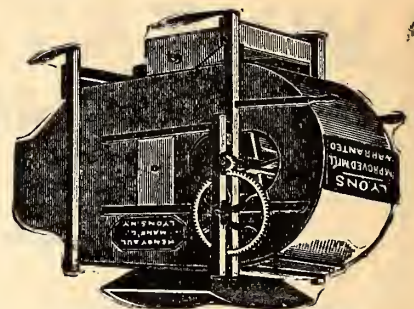
Latest Improved FARM IMPLEMENTS.



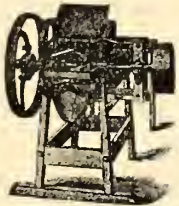
Scientific Steel Corn Harvester.
The best Harvester on earth, for standing corn
Safety seats. Safety shafts



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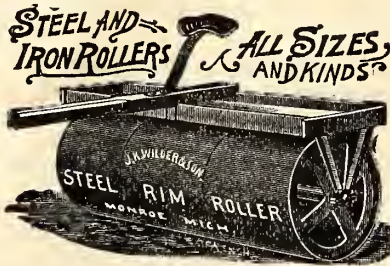


The Lyons Improved Fanning Mills.

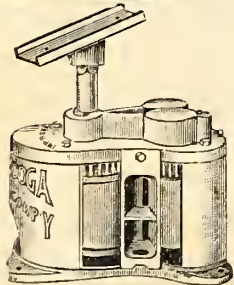


ROSS

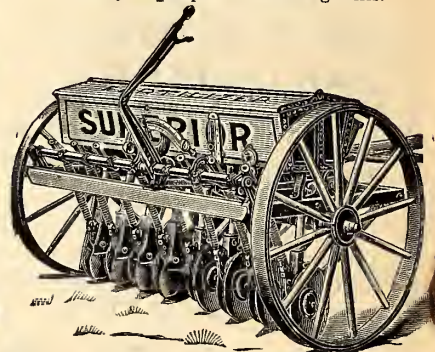
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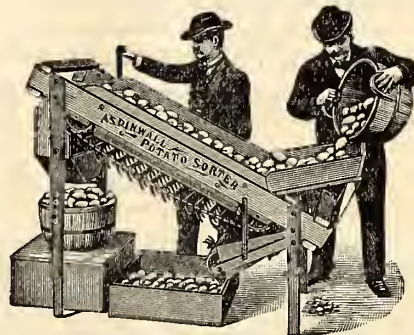
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Chattanooga
Cane Mills
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Plain and Fertilizer Hoe and Disc Drills—all sizes



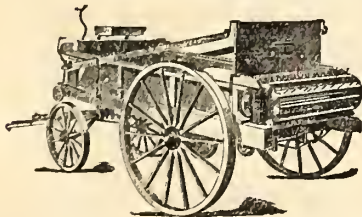
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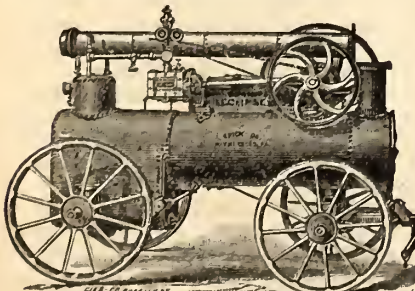
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Used by thousands of practical growers
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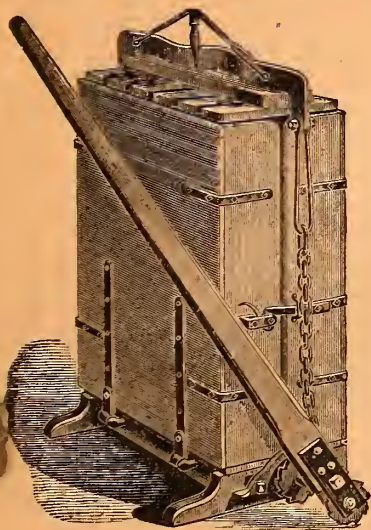
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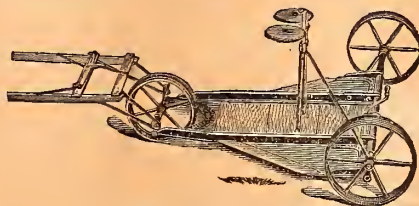
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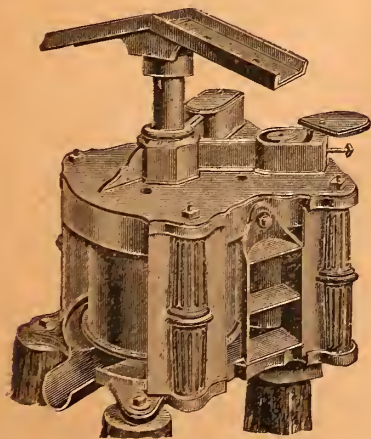
Dain Corn Cutter



Full Circle Horse Power Press



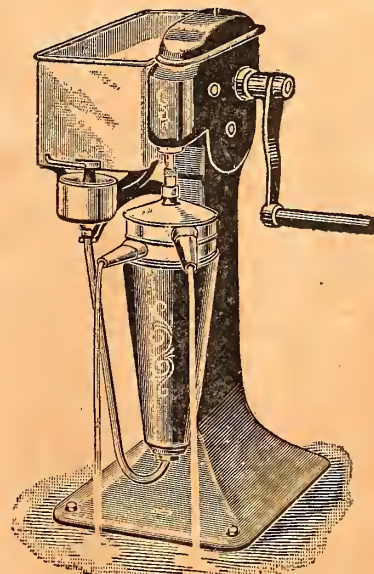
Cider Mill with Wooden Roller



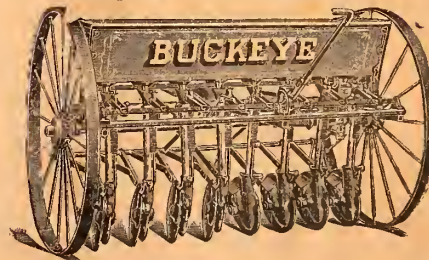
Cane Mill



Steel Beam Plow



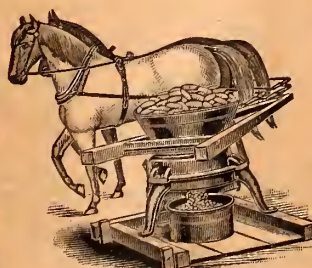
Sharples' Cream Separator



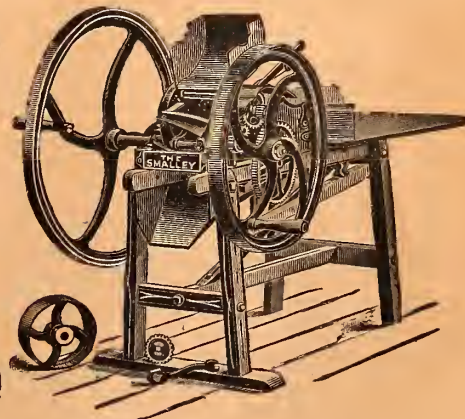
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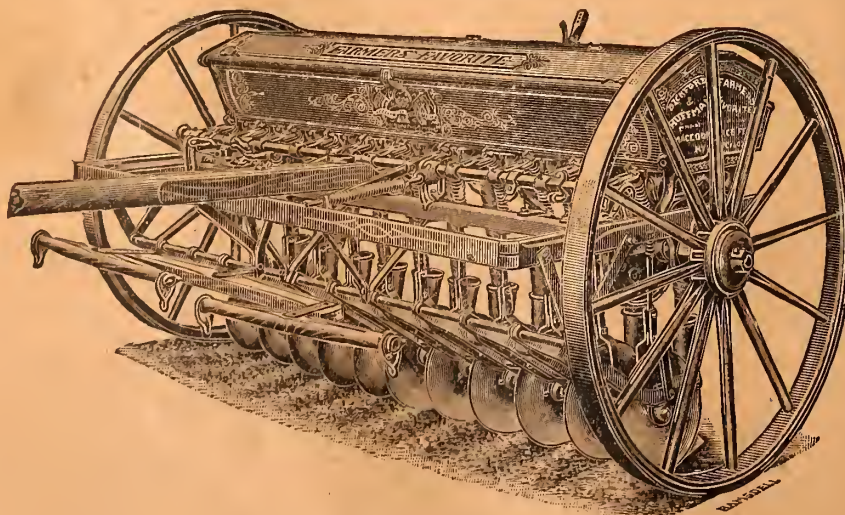
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The most improved, up-to-date drills made. Will drill wheat, corn, beans, peas and any other seeds; clover and grass seed attachments.



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It will be worth your time and trouble to see us or write us if you want a drill this Fall. We have inspected all of the drills at the St. Louis Exposition and are ready to give you the benefit of our investigation.

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